

### Speed Limit Review – Accent drive (East Tamaki)

Accent drive, East Tamaki, is divided into two sections as outlined below:

1. Section 1: Accent drive between Lady Ruby Drive and Wayne Francis Drive.
2. Section 2: Accent drive between Wayne Francis Drive and Chapel Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Accent drive, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Accent Drive connects to Lady Ruby Drive, East Tamaki Road, Reg Savory Place, Wayne Francis Drive, Savona Place and Stancombe Road to the east; Lady Ruby Drive, East Tamaki Road, Kord Kordel Place, Beales Place and Siedeberg Drive to the west; Te Irirangi Drive and Chapel Road to the north and south. This road provides access to commercial properties.	
	This section is approximately length 1.03 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately length 0.36 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	This section is a two-way, two lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, four lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records sixteen crashes between 2016 and 2020: zero fatal, zero serious, five minor and eleven non-injury crashes. This resulted in zero	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: zero fatal, zero serious, two minor and three non-injury

Requirement	Comments	
	Section 1	Section 2
	Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Accent Drive were determined using a combination of site drive-over footage, on-site information and GeoMap information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5 m)</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as “ <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> ”	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,709 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 11,571 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via email/meeting on date of sent memo/meeting. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 40.13 km/h.	This section has a mean operating speed of 45.74 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lady Ruby Drive:</b> 50 km/h</li> <li>• <b>East Tamaki Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Kordel Place:</b> 50 km/h</li> <li>• <b>Reg Savory Place:</b> 50 km/h</li> <li>• <b>Beale Place:</b> 50 km/h</li> <li>• <b>Te Irirangi Drive:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Wayne Francis Drive:</b> 50 km/h</li> <li>• <b>Siedeberg Drive:</b> 50 km/h</li> <li>• <b>Savona Drive:</b> 50 km/h</li> <li>• <b>Chapel Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Stancombe Road:</b> 60 km/h (proposed 50 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	5	2
DSI crashes during the period	0	0
Corridor Length (km)	1.03	0.36
Annual Daily Traffic	6,709	11,571

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Commercial big box	4.00	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60	>10	5.00
Access density (per km)	5 to <10	1.06	>20	1.30
Traffic volume (vpd)	6000 to <12000	3.00	6000 to <12000	2.20

- Section 1
  - The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.57. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Accent drive between Lady Ruby Drive and Wayne Francis Drive (section 1)
- 50 km/h on Accent drive between Wayne Francis Drive and Chapel Road (section 2)

Accent drive (section 1 and 2) is a self-explaining road as the mean operating speeds (40 and 45.74 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Accent drive (section 1 and 2) was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Accent Drive due to a multitude of factors. These being the very narrow shoulder width and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows twenty-one crashes in the last 5 years including zero fatal, zero serious, seven minor, and fourteen non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Accent Drive in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Anderson Road (Matakana)**

Anderson Road, Matakana (between Westminster Glen and Matakana Road) is divided into four sections as outlined below:

1. Section 1: between Westminster Glen and 310 east of Westminster Glen
2. Section 2: between 310 east of Westminster Glen and Matakana Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Anderson Road, Matakana (between Westminster Glen and Matakana Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Anderson Road connects to Westminster Glen to the North. This road provides access to residential properties.	Anderson Road connects to Westminster Glen to the North and, Matakana Road to the East. This road provides access to residential properties.
	This section is approximately 0.31 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).	This section is approximately 0.86 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020.

Requirement	Comments	
	and Serious Injury (DSI) crashes.	Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Anderson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 232 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 232 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	Section 1	Section 2
	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45.55 km/h.	This section has a mean operating speed of 45.55 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Westminster Glen:</b> 60 km/h.</li> <li>• <b>Anderson Road (western section):</b> 40 km/h.</li> <li>• <b>Rosemount Road:</b> 80 km/h.</li> <li>• <b>Matakana Road:</b> 80 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.31	0.86
Annual Daily Traffic	232	232

Section 1:

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**.

Section 2:

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.0	Unsealed	10.0
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	1 to <2	1.2
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume	<1000	1.0	<1000	1.0

Section 1:

The Infrastructure Risk Rating Score is **1.86**. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

The Infrastructure Risk Rating Score is **1.86**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1 and 2: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation:*

- 40 km/h between Westminster Glen and 310 east of Westminster Glen (Section 1)
- 60 km/h between 310 east of Westminster Glen and Matakana Road (Section 2)

Anderson Road is a self-explaining road as the mean operating speeds (45.55 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Anderson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h and 60 km/h was selected for this road due to a multitude of factors. These being the unsealed surface, medium lane width, very narrow shoulder width, straight nature of the road, high roadside hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road. This proposed speed was also chosen in order to ensure consistency with the rural unsealed road.

After considering all the above factors, the existing speed limit of 80 km/h on Anderson Road in Rodney, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h and 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ara Weiti Road (Stillwater)

The speed limit on Ara Weiti Road, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ara Weiti Road connects to East Coast Road to the west. This road is approximately 2.05 km in length.</p> <p>Ara Weiti Road is classified as an Access road under the one network road classification (ONRC). Ara Weiti Road is a two-way, Two lane undivided road. There are no pedestrian amenities or cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ara Weiti Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curve</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural residential using MegaMaps tool. The IRR defines rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	No planned modification to the road currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ara Weiti Road has a mean operating speed in the range of 30 to 40 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>East Coast Road: 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ara Weiti Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.59. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### Step 4: Conclusion

Existing speed limit: 100km/h

*Proposed safe and appropriate speed limit recommendation = 60km/h.*

Ara Weiti Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Ara Weiti Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed limit of 100 km/h on Ara Weiti Road, is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ash Road (Wiri)

The speed limit on Ash Road, Wiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ash Road connects to Wiri Station Road to the north and Kerrs Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.75 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records ten crashes between 2016 and 2020: zero fatal, zero serious, four minor and six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Ash Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0m-3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Industry using MegaMaps tool. The IRR defines Industry as <i>“Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.”</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5,484 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This road has a mean operating speed of 50.6 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wiri Station Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Kerrs Road:</b> 60 km/h (proposed 50 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	4
DSI crashes during the period	0
Corridor Length (km)	0.75
Annual Daily Traffic	5,484

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43
Adjacent land use	Industry	4.00
Intersection density (per km)	2 to <3	1.30
Access density (per km)	>20	1.30
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **1.77**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h Ash Road (Full Length).*

Ash Road is a self-explaining road as the mean operating speeds (50.6 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Ash Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Ash Road due to multitude of factors. These being very narrow shoulder width, moderate roadside hazards and commercial big box land use. This proposed speed was also chosen in order to ensure consistency with the surrounding network. Ash Road is identified as one of the top 10% DSI saving network sections.

Crash history from WK NZTA's CAS database shows ten crashes in the last 5 years including zero fatal, zero serious, four minor, and six non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Ash Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Aubrey Road (Stillwater)

The speed limit on Aubrey Road, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aubrey Road connects to Spur Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 0.75 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Aubrey Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: zero fatal, zero serious, one minor and one non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Aubrey Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 204 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Aubrey Road has a mean operating of 26 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Spur Road:</b> 80 km/h (proposed 60 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.75
Annual Daily Traffic	204

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.71**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Aubrey Road.*

Aubrey Road is a self-explaining road as the mean operating speeds (26 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Aubrey Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Aubrey Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows two crashes in the last 5 years including zero fatal, zero serious, one minor, and one non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Aubrey Road in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Aubrey Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Barrett Road (Riverhead)

The speed limit on Barrett Road (between Coatesville Riverhead Highway and Lloyd Road), Riverhead has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barrett Road connects to Coatesville Riverhead Highway to the North and adjacent section of Barrett Road and Lloyd Road to the South. This road provides access to residential properties.</p> <p>This section is approximately 0.98 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: zero fatal, zero serious, one minor and one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Barrett Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 661 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Coastville Riverhead Highway:</b> 60 km/h.</li> <li><b>Barrett Road (Southern Section):</b> 40 km/h.</li> <li><b>Lloyd Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.98
Annual Daily Traffic	661

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.46**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h Barrett Road (between Coatesville Riverhead Highway and Lloyd Road).*

Barrett Road is a self-explaining road as the mean operating speeds (52 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Barrett Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high roadside hazards.

Crash history from NZTA's CAS database shows two crashes in the last 5 years including zero fatal, zero serious, one minor, and one non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Barrett Road in Rodney, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Beaver Road (Bombay)

The speed limit on Beaver Road, between State Highway 1 and 1340m west of State Highway 1 (Waikato District boundary), Bombay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>This section of Beaver Road connects to State Highway 1 at the eastern end and continues in the Waikato District at the western end. The road provides access to rural residential properties.</p> <p>This section of Beaver Road is approximately 1.34 km in length. Beaver Road is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>Beaver Road is a two-lane, undivided road. There are no pedestrian or cyclist amenities along this road. There is no on-street parking along Beaver Road.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020, one non-injury and one minor injury crash. Beaver Road therefore has no Death and Serious Injury (DSI) crashes. CAS includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beaver Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (0 to &lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

Requirement	Comments
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using the drive over footage. The IRR defines Rural Residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/ factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersection per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 218 vehicles per day (vpd). This level of traffic volume is consistent with the nature of this road.
(i) any planned modification to the road; and	There are no known planned modifications to Beaver Road.
(j) the views of interested persons and groups.	The programme team have undertaken early engagement with key partners and stakeholders on the first stage of Tranche 2. This has included the Automobile Association, Auckland Council Safety Collective, Auckland Regional Public Health Service / Healthy Auckland Together, Bike Auckland, Fire and Emergency, Greater Auckland, Kainga Ora, NZ Police, Road Transport Forum, Safekids Aotearoa, Walk Auckland and Waka Kotahi. Potential changes to the speed limits in this area were presented to the Local Board via meetings on 20 April 2021 and 1 June 2021. More detailed feedback is anticipated from each group during public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Beaver Road is 100 km/h between State Highway 1 and 1340m west of State Highway 1
MegaMaps Mean Operating Speed (km/h)	Beaver Road has a mean operating speed in the range of 62 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Beaver Road (west of a point 1340m west of State Highway 1):</b> 100 km/h (within Waikato District)</li> <li><b>State Highway 1:</b> 100 km/hr</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.34
Annual Daily Traffic	218

The Collective Risk score is 0.00, and the Personal Risk score is 0.0. For rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume	< 1,000 vpd	1.00

The Infrastructure Risk Rating Score is 2.0. For rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for Beaver Road between State Highway 1 and 1340m west of State Highway 1.*

The mean operating speed on Beaver Road is 62 km/h which is significantly below the existing 100 km/h speed limit. Engineering up of Beaver Road was considered but dismissed due to the substantial and costly upgrades that would be required for what is a low volume, low classification road. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected due to the narrow lanes, winding layout, high roadside hazards and its existing operating speed (62 km/h). These features contribute to the roads "High" IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the speed limit of 100 km/h on Beaver Road between State Highway 1 and 1340m west of State Highway 1, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Beaver Road aligns with the Speed Management Guide (< 80 km/h) and the existing operating speed (62 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Botany Road (Botany Downs)

Botany Road, Botany Downs (between Cascades Road and Ti Rakau Drive) is divided into two sections as follows:<sup>1</sup>

1. Section 1: Botany Road between Cascades Road and Goffland Drive
2. Section 2: Botany Road between Goffland Drive and Ti Rakau Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Botany Road, Botany Downs has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Botany Road connects to Botany Road to the north, Te Irirangi Drive to the south, Ti Rakau Drive, Tarnica Road, Millhouse Drive and Vesca Place to the east and Cascades Road, Seneca Court, Goffland Drive and Ti Rakau Drive to the west. This road provides access to a mixture of residential and commercial properties.	
	This section is approximately 1.13 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.30 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, four-lane, undivided road. There are pedestrian amenities along this section. There are no on-street parking and no cyclist amenities.	This section is a two-way, four-lane, undivided road. There are pedestrian amenities along this section. There are no on-street parking and no cyclist amenities.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seventy-five crashes between 2016 and 2020: one fatal, zero serious, fourteen minor and sixty non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records seventeen crashes between 2016 and 2020: zero fatal, one serious, five minor and twelve non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Botany Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Botany Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments	
	Section 1	Section 2
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32,937 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 26,354 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed of 47.8 km/h.	This section of has a mean operating speed in the range of 39.49 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Te Irirangi Drive:</b> 80 km/h (proposed 50 km/h)</li> <li>• <b>Ti Rakau Drive:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Tarnica Road:</b> 50 km/h</li> <li>• <b>Golfland Drive:</b> 50 km/h</li> <li>• <b>Seneca Court:</b> 50 km/h</li> <li>• <b>Millhouse Drive:</b> 50 km/h</li> <li>• <b>Vesca Place:</b> 50km/h</li> <li>• <b>Cascades Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Botany Road:</b> 50 km/h</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	15	6
DSI crashes during the period	1	1

Corridor Length (km)	1.13	0.30
Annual Daily Traffic	32,937	26,354

- Section 1
  - The Collective Risk score is 0.18. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 1.47. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.66. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 6.88. For rural areas this corresponds to a Personal Risk band of **Medium**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40	Divided-traversable	3.00
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Urban residential	3.00	Commercial big box	4.00
Intersection density (per km)	3 to <5	1.50	3 to <5	1.50
Access density (per km)	>20	1.30	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.39. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.46. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Botany Road between Cascades Road and Golfland Drive (section 1)
- 50 km/h on Botany Road between Golfland Drive and Ti Rakau Drive (section 2)

Botany Road is a self-explaining road as the mean operating speeds (47.8 and 39.49 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Botany Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Botany Road due to a multitude of factors. These being the very narrow shoulder width, high road-side hazards and low mean operating speed (<50 km/h). All of these factors contribute to the road's 'High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Medium' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows ninety-two crashes in the last 5 years including one fatal, one serious, nineteen minor, and seventy-two non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Botany Road in Botany Downs, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Brigham Creek Road (Whenuapai)

Brigham Creek Road, Whenuapai, is divided into two sections as outlined below:

1. Section 1: Brigham Creek Road between 80m west of Kauri Road and 280m west of Trig Road
2. Section 2: Brigham Creek Road between 550m west of Totara Road and State Highway 16

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Brigham Creek Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Brigham Creek Road connects to Trig Road to the south. This road provides access to residential properties.	Brigham Creek Road connects to Airport Road, Nils Anderson Road, Totara Road, Ripeka Road, Boyes Avenue and Joseph Macdonald Drive to the north and Mamari Road to the South and SH 16 to the west. This road provides access to residential properties.
	This section is approximately 1.50 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 0.73 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	This Brigham Creek Road is a two-way, two-lane, undivided road. There are no pedestrian amenities and no cyclist amenities. There is on-street parking along this road.	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and no cyclist amenities. There is on-street parking along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six	WK NZTA's Crash Analysis System (CAS) records fifteen

Requirement	Comments	
	crashes between 2016 and 2020: zero fatal, zero serious, two minor and four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	crashes between 2016 and 2020: one fatal, zero serious, five minor and nine non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Brigham Creek Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8,350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 12,988 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean	This section of Brigham Creek Road has a mean operating speed of 64.16 km/h.	This section of Brigham Creek Road has a mean operating speed of 63.43 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Trig Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Airport Road:</b> 50 km/h</li> <li>• <b>Niils Anderson Road:</b> 50 km/h</li> <li>• <b>Totara Road:</b> 50 km/h</li> <li>• <b>Mamari Road:</b> 50 km/h</li> <li>• <b>Ripeka Lane:</b> 50 km/h</li> <li>• <b>Boyes Avenue:</b> 50 km/h</li> <li>• <b>Joseph Macdonald Drive:</b> 50 km/h</li> <li>• <b>SH 16:</b> 100 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	6
DSI crashes during the period	0	1
Corridor Length (km)	1.50	0.73
Annual Daily Traffic	8,350	12,988

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.
- Section 2:
  - The Collective Risk score is **0.27**. For Rural areas this corresponds to a Collective Risk band of **High**.
  - The Personal Risk score is **5.76**. For Rural areas this corresponds to a Personal Risk band of **Medium**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	1 to <2	1.2
Access density (per km)	2 to <5	1.03	5 to <10	1.06
Traffic volume	6000 to <12000	2.2	>12000	2.2

Section 1:

- The Infrastructure Risk Rating Score is 2.03. For Rural areas this corresponds to an IRR band of **High**.

Section 2:

- The Infrastructure Risk Rating Score is 1.92. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

Section 2: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h between 80m west of Kauri Road and 280m west of Trig Road (*Section 1*)
- 60 km/h between 550m west of Totara Road and State Highway 16 (*Section 2*)

Brigham Creek Road is a self-explaining road as the mean operating speeds (64.16 km/h and 63.43 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Brigham Creek Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for section 1 and 2 of Brigham Creek Road due to multitude of factors. These being the medium lane width, narrow shoulder width, curved nature of the road, high road side hazards and local land use. All of these factors contribute to the road's 'High' and 'Medium-High' IRR score respectively. The collective and personal risk of section 2 of this road are classified as "**High**" and "**Medium**" respectively due the number of Death and Serious Injury (DSI)

crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows twenty-one crashes in the last 5 years including one fatal, zero serious, seven minor, and thirteen non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Brigham Creek Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Bristol Road (Whenuapai)

The speed limit on Bristol Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bristol Road connects to Dale Road to the south, Rope Road and Riverlea Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.82 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Bristol Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as an "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 637 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bristol Road has a mean operating speed of 43.56 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Dale Road:</b> 80 km/h (proposed 50 and 60 km/h)</li> <li><b>Rope Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Riverlea Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.82
Annual Daily Traffic	637

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.45**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h Bristol Road (Full length)*

Bristol Road is a self-explaining road as the mean operating speeds (43.56 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Bristol Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for this road due to multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road side hazards and low mean operating speeds. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 80 km/h on Bristol Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Brown Street (Ponsonby)**

The speed limit on Brown Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brown Street connects to Ponsonby Road to the East, Richmond Road to the West and forms a 4-way junction with Fitzroy Street. This road provides access to residential properties.</p> <p>This section is approximately 0.59 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one minor and eight non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Brown Street were determined using a combination of site drive-over footage, on-site information and geomatics information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0m) and Very narrow shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,099 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
Megamaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ponsonby Road:</b> 50 km/h.</li> <li>• <b>Richmond Road:</b> Variable Speed 40 km/h &amp; 50 km/h.</li> <li>• <b>Fitzroy Street:</b> 50 Km/h (proposed 30 km/h).</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.59
Annual Daily Traffic	1,099

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.30
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **2.12**. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h Brown Street (Full Length)*

Brown Street is a self-explaining road as the mean operating speeds are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Brown Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, moderate roadside hazards and low mean operating speeds (<30 km/h). This proposed speed was chosen in order to ensure consistency with the surrounding network.

Crash history from NZTA's CAS database shows nine crashes in the last 5 years including one minor, and eight non-injury crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Brown Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Brown Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered

appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Campana Road (Wiri)**

The speed limit on Campana Road, Wiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Campana Road connects to Puhinui Road to the south. This road provides access to residential properties.
	This section is approximately 0.40 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, unsealed road. There is no pedestrian, cyclist amenities and on-street parking along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Campana Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps/ Auckland Transport Traffic Counts as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Puhinui Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	<b>0</b>
DSI crashes during the period	0
Corridor Length (km)	0.40
Annual Daily Traffic	131

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.30
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **1.90**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h Campana Road (Full Length).*

Campana Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Campana Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this Campana Road due multitude of factors. These being the narrow lane width, very narrow shoulder width, high roadside hazards and low mean operating speeds (<40 km/h). All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Campana Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Cascades Road (Pakuranga Heights)

Cascades Road, Pakuranga Heights (between 300m west of Aviemore Drive to Botany Road), is divided into two sections as follows:<sup>1</sup>

1. Section 1: Cascades Road between 300m west of Aviemore Drive to Aviemore Drive
2. Section 2: Cascades Road between Aviemore Drive to Botany Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Cascades Road, Pakuranga Heights has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Cascades Road connects to Lochend Place, Aviemore Drive, Bernie Edwards Place and Solana Court to the north, Botany Road to the east and Cascades Road to the west. This road provides access to residential properties.	
	This section is approximately 0.3 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.6 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and	WK NZTA's Crash Analysis System (CAS) records thirteen

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	2020: zero fatal, zero serious, two minor and four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	crashes between 2016 and 2020: zero fatal, zero serious, one minor and twelve non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Cascades Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Cascades Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 22,260 vehicles per day (vpd). This level of traffic volume is	Average daily traffic (ADT) was determined from MegaMaps as 29,944 vehicles per day (vpd). This level of traffic volume is

Requirement	Comments	
	Section 1	Section 2
	consistent with the nature of the road and traffic survey.	consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section of has a mean operating speed of 47.68 km/h.	This section of has a mean operating speed of 47.67 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Cascades Road:</b> 50 km/h</li> <li>• <b>Lochend Place:</b> 50 km/h</li> <li>• <b>Aviemore Drive:</b> 60 km/h</li> <li>• <b>Bernie Edwards Place:</b> 50 km/h</li> <li>• <b>Solana Court:</b> 50 km/h</li> <li>• <b>Botany Road (north):</b> 50 km/h</li> <li>• <b>Botany Road (south):</b> 60 km/h (proposed 50 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	1
DSI crashes during the period	0	0
Corridor Length (km)	0.3	0.6
Annual Daily Traffic	22,260	29,944

- Section 1

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Multi-lane Undivided	3.40
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Wide lane, Very narrow shoulder	1.58
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Urban residential	3.00	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60	5 to <10	2.6
Access density (per km)	>20	1.30	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.57. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.53. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Cascades Road between 300m west of Aviemore Drive to Aviemore Drive
- 50 km/h on Cascades Road between Aviemore Drive to Botany Road

Cascades Road is a self-explaining road as the mean operating speeds (47.68 and 47.67 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Cascades Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Cascades Road due to a multitude of factors. These being the very narrow shoulder width, and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows nineteen crashes in the last 5 years including zero fatal, zero serious, three minor, and sixteen non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Cascades Road in Pakuranga Heights, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Cavendish Drive (Manukau)**

Cavendish Drive, Suburb, is divided into three sections as follows: <sup>1</sup>

- Section 1: Cavendish Drive between Great South Road and Lambie Drive.
- Section 2: Cavendish Drive between Lambie Drive and Noel Burnside Road.
- Section 3: Cavendish Drive between Noel Burnside Road and Jerry Green Street.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Cavendish Drive, Manukau has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Cavendish Drive connects to Jerry Green Street, Noel Burnside Road, Glasgow Avenue, Plunket Avenue, Lambie Drive, Sharkey Street to the south, State Highway 20 motorway onramp/offramp, Great South Road, Te Irirangi Drive to the east, State Highway 20 motorway onramp/offramp, Noel Burnside Road to the west and Nesdale Avenue, Ranfurly Road, Plunket Avenue, Grayson Avenue, Norman Spencer Drive, Lambie Drive, Jack Conway Avenue to the north. This road provides access to commercial and residential properties.		
	This section is approximately 0.76 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 2.02 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 0.46 km in length. It is classified as a Regional road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>eighty-five</b> crashes between 2016 and 2020: zero fatal, four serious, eleven minor and seventy non-injury crashes. This resulted in four Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>eighty-four</b> crashes between 2016 and 2020: zero fatal, four serious, twenty minor and sixty non-injury crashes. This resulted in four Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>thirty-four</b> crashes between 2016 and 2020: one fatal, one serious, eleven minor and twenty-one non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Cavendish Drive is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Cavendish Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Multi-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32,052 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 31,208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 33,136 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 44.46km/h.	This section has a mean operating speed of 50.57 km/h.	This section has a mean operating speed of 47.72 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Jerry Green Street: 60 km/h</li> <li>Noel Burnside Road: 60 km/h</li> <li>Glasgow Avenue: 50 km/h</li> <li>Plunket Avenue: 50 km/h</li> <li>Lambie Drive: 60 km/h (proposed 50 km/h)</li> <li>Sharkey Street: 50 km/h</li> <li>State Highway 20 motorway: 100 km/h</li> <li>Great South Road: 60 km/h (proposed 50 km/h)</li> <li>Te Irirangi Drive: 60 km/h (proposed 50 km/h)</li> <li>Nesdale Avenue: 50 km/h</li> <li>Ranfurl Road: 50 km/h</li> <li>Grayson Avenue: 50 km/h</li> <li>Norman Spencer Drive: 50 km/h</li> <li>Jack Conway Avenue: 50 km/h</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	15	24	13
DSI crashes during the period	4	4	2
Corridor Length (km)	0.76	2.02	0.46
Annual Daily Traffic	32,052	31,208	33,136

- Section 1
  - The Collective Risk score is 1.05. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 8.96. For urban areas this corresponds to a Personal Risk band of **Medium-High**
- Section 2

- Section 3
  - The Collective Risk score is 0.88. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 7.27. For urban areas this corresponds to a Personal Risk band of **Medium-High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.00	Multi-lane undivided	3.40	Divided-traversable	3.00
Road alignment	Straight	1.00	Curved	1.80	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01	Medium lane, Narrow shoulder	1.45
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43	High	2.28
Adjacent land use	Commercial big box	4.00	Commercial big box	4.00	Commercial big box	4.00
Intersection density (per km)	5 to <10	2.60	3 to <5	1.50	5 to <10	2.60
Access density (per km)	>20	1.30	>20	1.30	<1	1.00
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.56. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Cavendish Drive Great South Road and Lambie Drive (section 1)
- 50 km/h on Cavendish Drive Lambie Drive and Noel Burnside Road (section 2)
- 50 km/h on Cavendish Drive Noel Burnside Road and Jerry Green Street (section 3)

Cavendish Drive is a self-explaining road as the mean operating speeds (44.6 to 50.6 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Cavendish Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Cavendish Drive due to a multitude of factors. These being the narrow lane and shoulder width, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Medium-High' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows two hundred and three crashes in the last 5 years including one fatal, nine serious, forty-two minor, and hundred and fifty-one non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Cavendish Drive in Manukau, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Chapel Road (East Tamaki)

Chapel Road, East Tamaki, is divided into three sections as follows: <sup>1</sup>

1. Section 1: Chapel Road between Dawson Road to 200m north of Ormiston Road
2. Section 2: Chapel Road between 200m north of Ormiston Road to Baverstock Road.
3. Section 3: Chapel Road between Baverstock Road to Smales Road.
4. Section 4: Chapel Road between Smales Road to Armoy Drive.
5. Section 5: Chapel Road between Armoy Drive to Ti Rakau Drive
6. Section 6: Chapel Road between Ti Rakau Drive to Orangewood Drive/Whitford Road Roundabout.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Chapel Road, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Chapel Road connects to Dawson Road, Matthews Road and Thomas Road to the south, Smales Road, Chapel Road and Kilkenny Drive to the north, Ballybay Road, Banville Road, Premwood Road, Spenbrooke Road, Accent Drive, Ormiston Road, Fusion Road, Michael Jones Drive, Medvale Avenue to the west and Rialto Court, Gracechurch Drive, Barcaldine Road, Duntrune Road, Cyril French Drive, Baverstock Road, Stancombe Road, Ormiston Road, Flat Bush School Road, Broadhurst Road and Carrick Glen Avenue to the east. This road provides access to commercial and residential properties.		

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is approximately 2.04 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 0.93 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 1.36 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, divided road. There are pedestrian amenities, cyclist amenities and on-street parking along this section.	This section is a two-way, two-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>forty-nine</b> crashes between 2016 and 2020: zero fatal, zero serious, nine minor and forty non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>thirty-nine</b> crashes between 2016 and 2020: one fatal, two serious, eleven minor and twenty-five non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>thirty</b> crashes between 2016 and 2020: zero fatal, zero serious, four minor and twenty-six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Chapel Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane</li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
	m) and Very narrow shoulder (<0.5 m) <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	(<3.0 m) and Wide shoulder (1.0 to 2.0 m) <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	(3.0 to 3.5 m) and Very narrow shoulder (<0.5 m) <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 16,359 vehicles per day (vpd). This level of traffic volume is consistent with the	Average daily traffic (ADT) was determined from MegaMaps as 17,529 vehicles per day (vpd). This level of traffic volume is consistent with the	Average daily traffic (ADT) was determined from MegaMaps as 19,479 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments		
	Section 1	Section 2	Section 3
	nature of the road and traffic survey.	nature of the road and traffic survey.	
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.		

Requirement	Comments		
	Section 4	Section 5	Section 6
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Chapel Road connects to Kilkenny Drive, Chapel Road and Smales Road, Santa Ana Drive to the south, Kingsgate Place, Maghera Drive, Dannemora Drive to the east, Stellamaris Way, Kilimanjaro Drive, Armoy Drive, Ti Rakau Drive, Carlingford Drive to the west, Orangewood Drive and Whitford Road to the north. This road provides access to commercial and residential properties.		
	This section is approximately 0.71 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.81 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 1.62 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, divided road. There are pedestrian amenities along this section. There are no	This section is a two-way, two-lane, divided road. There are pedestrian amenities, cyclist amenities and on-	This section is a two-way, two-lane, divided road. There are pedestrian amenities and on-street parking along this section.

Requirement	Comments		
	Section 4	Section 5	Section 6
	cyclist amenities and no on-street parking.	street parking along this section.	There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>seven</b> crashes between 2016 and 2020: zero fatal, zero serious, one minor and six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>twenty-two</b> crashes between 2016 and 2020: zero fatal, zero serious, four minor and eighteen non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>thirty-one</b> crashes between 2016 and 2020: zero fatal, one serious, six minor and twenty-four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Chapel Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Chapel Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Multi-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and	The adjacent land use is classified as Commercial big box using on-site information and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR

Requirement	Comments		
	Section 4	Section 5	Section 6
	geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20,079 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 20,741 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 21,531 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes..		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed in the range of 47.6 km/h.	This section of has a mean operating speed in the range of 49.7 km/h.	This section of has a mean operating speed in the range of 43.2 km/h.
AT also had regard to	Section 4	Section 5	Section 6
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed in the range of 44.1 km/h.	This section of has a mean operating speed in the range of 42.5 km/h.	This section of has a mean operating speed in the range of 49.1 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads (for Section 1 to Section 6) are: <ul style="list-style-type: none"> <li>Dawson Road: 50 km/h</li> <li>Matthews Road: 50 km/h</li> <li>Thomas Road: 50 km/h:</li> <li>Smales Road: 60 km/h (proposed 50 km/h)</li> <li>Kilkenny Drive: 50 km/h</li> <li>Ballybay Road: 50 km/h</li> <li>Banville Road: 50 km/h</li> <li>Premwood Road: 50 km/h</li> <li>Spembrooke Road: 50 km/h</li> <li>Accent Drive: 60 km/h (proposed 50 km/h)</li> <li>Ormiston Road: 60 km/h (proposed 50 km/h)</li> <li>Fusion Road: 50 km/h</li> <li>Michael Jones Drive: 50 km/h</li> <li>Medvale Avenue: 50 km/h</li> <li>Rialto Court: 50 km/h</li> <li>Gracechurch Drive: 50 km/h</li> <li>Barcaldine Road: 50 km/h</li> <li>Dunrune Road: 50 km/h</li> <li>Cyril French Drive: 50 km/h</li> <li>Baverstock Road: 50 km/h</li> <li>Stancombe Road: 60 km/h (proposed 50 km/h)</li> <li>Flat Bush School Road: 50 km/h</li> <li>Broadhurst Road: 50 km/h</li> <li>Carrick Glen Avenue: 50 km/h</li> <li>Santa Ana Drive: 50 km/h</li> <li>Kingsgate Place: 50 km/h</li> <li>Maghera Drive: 50 km/h</li> <li>Dannemora Drive: 50 km/h</li> <li>Stellamaris Way: 50 km/h</li> <li>Kilimanjaro Drive: 50 km/h</li> <li>Armoy Drive: 50 km/h</li> </ul>		

	<ul style="list-style-type: none"> <li>• Ti Rakau Drive: 60 km/h (proposed 50 km/h)</li> <li>• Carlingford Drive: 50 km/h</li> <li>• Orangetown Drive: 50 km/h</li> <li>• Whitford Road: 50 km/h</li> </ul>
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**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	9	14	4
DSI crashes during the period	0	3	0
Corridor Length (km)	2.04	0.93	1.36
Annual Daily Traffic	16,359	17,529	19,479
Required Information for safety metrics calculations	Data		
	Section 4	Section 5	Section 6
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	4	7
DSI crashes during the period	0	0	1
Corridor Length (km)	0.71	0.81	1.62
Annual Daily Traffic	20,079	20,741	21,531

- Section 1:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2:
  - The Collective Risk score is 0.65. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 10.08. For urban areas this corresponds to a Personal Risk band of **High**
- Section 3:
  - The Collective Risk score is 0.0. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.0. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 4:
  - The Collective Risk score is 0.0. For urban areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.0. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 5:
  - The Collective Risk score is 0.0. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.0. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 6:
  - The Collective Risk score is 0.12. For urban areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 1.57. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Narrow lane, Wide shoulder	1.22	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3.00	Commercial big box	4.00	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50	2 to <3	1.30	5 to <10	2.60
Access density (per km)	>20	1.30	2 to <5	1.03	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00
Feature	Section 4		Section 5		Section 6	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00

Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	High	2.80	High	2.80
Adjacent land use	Urban residential	3.00	Commercial big box	4.00	Urban residential	3.00
Intersection density (per km)	2 to <3	1.30	3 to <5	1.50	3 to <5	1.50
Access density (per km)	>20	1.30	2 to <5	1.03	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.00. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**
- Section 4
  - The Infrastructure Risk Rating Score is 2.14. For urban areas this corresponds to an IRR band of **Medium**
- Section 5
  - The Infrastructure Risk Rating Score is 2.45. For urban areas this corresponds to an IRR band of **Medium-High**
- Section 6
  - The Infrastructure Risk Rating Score is 2.39. For urban areas this corresponds to an IRR band of **Medium**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Chapel Road between Dawson Road to 200m north of Ormiston Road (section 1)
- 50 km/h on Chapel Road between 200m north of Ormiston Road to Baverstock Road (section 2)
- 50 km/h on Chapel Road between Baverstock Road to Smales Road (section 3)

- 50 km/h on Chapel Road between Smales Road to Armoy Drive (section 4)
- 50 km/h on Chapel Road between Armoy Drive to Ti Rakau Drive (section 5)
- 50 km/h on Chapel Road between Ti Rakau Drive to Orangewood Drive/Whitford Road Roundabout (section 6)

Chapel Road section is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Engineering up of Chapel Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Chapel Road due to a multitude of factors. These being the very narrow shoulder width, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as '**High**' and '**High**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows hundred and seventy-eight crashes in the last 5 years including zero fatal, three serious, thirty-five minor, and hundred and thirty-nine non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Chapel Road in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Creamery Road (Mangere)

The speed limit on Creamery Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Creamery Road connects to Greenwood Road to the west and Kirkbride Road, Wallace Road and Mountain Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.43 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: zero fatal, zero serious, zero minor and three non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Creamery Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Severe.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Greenwood Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Kirkbride Road:</b> 50 km/h.</li> <li><b>Wallace Road:</b> 50 km/h.</li> <li><b>Mountain Road:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.43
Annual Daily Traffic	1,520

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Wide lane, Very narrow shoulder	1.58
Roadside hazards	Severe	2.80
Adjacent land use	Urban residential	3.0
Intersection density (per km)	1 to <2	1.2
Access density (per km)	5 to <10	1.06
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **2.14**. For Urban areas this corresponds to an IRR band of Low-Medium.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Creamery Road (Full Length).*

Creamery Road is a self-explaining road as the mean operating speeds (50 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Creamery Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Creamery Road due to multitude of factors. These being very narrow shoulder width, curved nature of the road, severe roadside hazards. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows three crashes in the last 5 years, including zero fatal, zero serious, zero minor and three non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Creamery Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Dairy Flat Highway (Dairy Flat)

The speed limit on Dairy Flat Highway, Dairy Flat (between State Highway 1 and 100m southwest of Pine Valley Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dairy Flat Highway connects to Northern Motorway to the east and Pine Valley Road to the west. This road provides access to Northern Motorway.</p> <p>This section is approximately 0.38 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian and cyclist amenities along this road. There is on street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records fourteen crashes between 2016 and 2020: zero fatal, one serious, two minor and eleven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Dairy Flat Highway were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very wide shoulder (&gt; 2.0m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 15,640 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 57.86 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Northern Motorway:</b> 100 km/h.</li> <li><b>Pine Valley Road:</b> 80 km/h. (Proposed 60 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	0.37
Annual Daily Traffic	15,640

- The Collective Risk score is **0.54**. For Rural areas this corresponds to a Collective Risk band of **High**

- The Personal Risk score is **9.46**. For Rural areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	5 to <10	1.06
Traffic volume	>12000	3.0

The Infrastructure Risk Rating Score is **2.03**. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h Dairy Flat Highway (between SH1 and 100m southwest of Pine Valley Road).*

This section of Dairy Flat Road is a self-explaining road as the mean operating speeds is below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. In addition, this section of Dairy Flat Highway is becoming urbanised and the new development will change the existing road environment. The residential developments are also likely to reduce the operating speed.

A proposed speed limit of 60 km/h was selected for this road due to multitude of factor. These being the medium lane width, very wide shoulder width, straight nature of the road, high roadside hazards and rural residential land use. All of these factors contribute to the road's 'High' IRR score. Both the collective and personal risk of this road are classified as '**High**' due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows fourteen crashes in the last 5 years including zero fatal, one serious, two minor, and eleven non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Dairy Flat Highway in Dairy Flat, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dale Road (Whenuapai)

Dale Road, Whenuapai (between 45m west of Totara Road and western end of Dale Road), is divided into two sections as outlined below:

1. Section 1: Dale Road between 45m west of Totara Road and Riverlea Road.
2. Section 2: Dale Road between Riverlea Road and western end of Dale Road

The speed limit on Dale Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Dale Road connects to Riverlea Road and Bristol Road to the north. This road provides access to residential properties.	Dale Road provides access to residential properties.
	This section is approximately 0.93 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.33 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, unsealed road. There are no pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dale Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	

Requirement	Comments	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 712 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 73 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes..	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dale Road has a mean operating speed of 48.74 km/h.	This section of Dale Road has a mean operating speed of 20km/h.

Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Riverlea Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Bristol Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>
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**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.93	0.33
Annual Daily Traffic	712	73

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature				
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Unsealed	10.0
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5	3 to <5	1.5
Access density (per km)	>20	1.3	5 to <10	1.06

Traffic volume	<1000	1.0	<1000	1.0
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- Section 1:
  - The Infrastructure Risk Rating Score is **1.65**. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2:
  - The Infrastructure Risk Rating Score is **1.99**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

For section 1 & 2 of Dale Road the safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation:*

- 50 km/h between 45m west of Totara Road and Riverlea Road (Section 1)
- 60 km/h between Riverlea Road and western end of Dale Road (Section 2)

Dale Road is a self-explaining road as the mean operating speeds (48.74 and 20 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Dale Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h and 60 km/h were selected for Section 1 and 2 respectively for Dale Road due to multitude of factors. These being the unsealed surface, narrow lane width, very narrow shoulder width, straight nature of the road, high road side hazards and local land use. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 80 km/h on Dale Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h and 60 km/h on section 1 and 2, which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Dominion Road (Mt Eden)

Dominion Road (Mt Eden), is divided into one section as outlined below:

1. Section 1: between Ian Mckinnon Drive and Horopito Street.

The speed limit on Dominion Road, Mt Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dominion Road connects to Ian Mckinnon Drive to the north, Horopito Street to the west and adjacent section of Dominion Road to the south. This road provides access to Dominion Road interchange ramp.</p> <p>This section is approximately 0.28 km in length. It is classified as an Arterial road under the one network road classification (ONRC).</p> <p>This section is a two-way, multilane-lane, divided road. There are protected pedestrian and cyclist amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: zero fatal, zero serious, one minor and five non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Dominion Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-non-traversable.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled access using MegaMaps tool. The IRR defines Controlled access as " <i>with roadside development and controlled access, such as an urban state</i>

Requirement	Comments
	<i>highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 22,716 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 55.18 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ian Mckinnon Drive:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Dominion Road interchange:</b> 50 km/h.</li> <li><b>Horopito Street:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.28
Annual Daily Traffic	22,716

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Divided-non-traversable	1.0
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43
Adjacent land use	Controlled access	2.0
Intersection density (per km)	3 to <5	1.50
Access density (per km)	5 to <10	1.06
Traffic volume	>12000	3.0

- The Infrastructure Risk Rating Score is **1.39**. For Urban areas this corresponds to an IRR band of **Low**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Dominion Road (between Ian Mckinnon Drive and Horopito Street).*

Dominion Road is a road which requires challenging conversations and behavioural change from road users in order to introduce a lower yet necessary speed limit. Engineering down/up of Dominion Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Dominion Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road and moderate roadside hazards and controlled access land use. This section of Dominion Road has high number of cycling demanded. This proposed speed will create a safer cycling environment and ensure consistency speed with the surrounding network.

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, zero serious, one minor, and five non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Dominion Road, Mt Eden, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

As previously mentioned, the cost of engineering down Dominion Road would substantially outweigh any benefits. Therefore, no physical interventions are proposed for this road. Given that the existing mean operating speed is 55.18 km/h and the survey 85<sup>th</sup> percentile speed is 63 km/h, which is higher than the recommended speed limit of 50 km/h, behavioural changes will be required of road users. Informative consultation will be vital to ensuring that the reasoning behind lowering the speed limit is conveyed, as well as ensuring that the new speed limit is adhered to and that the buy-in of local users is achieved.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Douglas Street (Ponsonby)

The speed limit on Douglas Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Douglas Street connects to Ponsonby Road to the East, Fitzroy Street to the south and Richmond Road to the West. This road provides access to residential properties.</p> <p>This section is approximately 0.61 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine non-injury crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Douglas Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23.68 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ponsonby Road:</b> 50 km/h.</li> <li><b>Fitzroy Street:</b> 50 km/h. (proposed 30 km/h).</li> <li><b>Richmond Road:</b> Variable Speed 40 km/h &amp; 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.61
Annual Daily Traffic	1,040

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.30
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **2.33**. For Urban areas this corresponds to an IRR band of Medium.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h Douglas Street (Full Length)*

Douglas Street is a self-explaining road as the mean operating speeds (23.68 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Douglas Street was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to a multitude of factors. These being to the narrow lane width, narrow shoulder width, moderate roadside hazards and urban residential land use. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from NZTA's CAS database shows nine non-injury crashes in the last 5 years.

After considering all the above factors, the existing speed limit of 50 km/h on Douglas Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Douglas Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (23.68 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Druces Road (Wiri)

The speed limit on Druces Road, Wiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Druces Road connects to Wiri Station Road and Lambie Drive to the north, and Kerrs Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.06 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, divided-non-traversable road. There are pedestrian amenities, cyclist amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirty -five crashes between 2016 and 2020: zero fatal, one serious, nine minor and twenty-five non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Druces Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-non-traversable.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,164 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 45.92 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wiri Station Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Lambie Drive:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Kerrs Road:</b> 60 km/h (proposed 50 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	10
DSI crashes during the period	1
Corridor Length (km)	1.06
Annual Daily Traffic	9,164

- The Collective Risk score is **0.19**. For urban areas this corresponds to a Collective Risk band of **Medium-High**.

- The Personal Risk score is **5.64**. For urban areas this corresponds to a Personal Risk band of **Medium**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Divided-non-traversable	1.00
Road alignment	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58
Roadside hazards	Moderate	1.43
Adjacent land use	Commercial big box	4.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	10 to <20	1.10
Traffic volume	6000 to <12000	2.20

The Infrastructure Risk Rating Score is **1.48**. For Urban areas this corresponds to an IRR band of **Low**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Druces Road (Full Length).*

Druces Road is a self-explaining road as the mean operating speeds (45.92 km/h) is below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Druces Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Druces Road due to multitude of factors. These being very narrow shoulder width, moderate roadside hazards and commercial big box land use.

Due to adverse crash history on the road. The collective and personal risk of this road are classified as **'Medium-High'** and **'Medium'** respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows thirty-five crashes in the last 5 years including zero fatal, one serious, nine minor, and twenty-five non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Druces Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Duck Creek Road (Stillwater)

The speed limit on Duck Creek Road, Stillwater (Between Spur Road and 200m southwest of Coastal Heights) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Duck Creek Road connects to Spur Road and Messenger Road to the north. This road provides access to residential properties.
	<p>This section is approximately 4.04 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one fatal, one serious, four minor and five non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Duck Creek Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for Duck Creek Road were determined using MegaMaps tool/ a combination of site drive-over footage and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool/ a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,866 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed	This section of Duck Creek Road has a mean operating speed in the range of 50.1 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Spur Road:</b> 80 km/h (Proposed 60 km/h)</li> <li><b>Messenger Road:</b> 80 km/h (Proposed 60 km/h)</li> <li><b>Coastal Heights:</b> 50 km/h</li> <li><b>Stillwater Crescent:</b> 50 km/h</li> <li><b>Upper Duck Creek Road:</b> 50 km/h</li> <li><b>Snapper Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1
Crash Analysis Period (years)	5
Total injury crashes during period	6
DSI crashes during the period	2
Corridor Length (km)	4.04

Annual Daily Traffic	1,866
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- The Collective Risk score is **9.90**. For Rural areas this corresponds to a Collective Risk band of **Medium**.
- The Personal Risk score is **14.54**. For Rural areas this corresponds to a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

Feature	Section 1	
	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	5 to <10	1.06
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is **2.37**. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h between Spur Road and 200m southwest of Coastal Heights.*

Duck Creek Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Duck Creek Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Duck Creek Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, tortuous nature of the road, high road-side hazards. All of these factors contribute to the road's '**High**' IRR score. The collective and personal

risk of this road are classified as '**Medium**' and '**High**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows nine crashes in the last 5 years including one fatal, one serious, four minor and five non-injury crashes

After considering all of the above factors, the existing speed limit of 80 km/h on Duck Creek Road in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Duck Creek Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dye Access Road (Kaukapakapa)

The speed limit on Dye Access Road, Kaukapakapa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dye Access Road connects to Rapson Road to the south. This road provides access to residential properties.
	This section is approximately 0.36 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dye Access Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km.</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 29 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 32.46 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Rapson Road:</b> 100 km/h (proposed speed: 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.36
Annual Daily Traffic	29

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **2.05**. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h Dye Access Road (Full length).*

Dye Access Road is a self-explaining road as the mean operating speeds (32.46 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Dye Access Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this Dye Access Road due to multitude of factors. These being narrow lane width, very narrow shoulder width, curved nature of the road, and high roadside hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 100 km/h on Dye Access Road in Kaukapakapa, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – East Coast Road (Silverdale)**

East Coast Road, Silverdale, is divided into five sections as outlined below:

- Section 1: East Coast Road between 330 m south of Tavern Road and 400 m south of Tavern Road
- Section 2: East Coast Road between 400 m south of Tavern Road and 1700m south of Hibiscus Coast Highway.
- Section 3: East Coast Road between 1700m south of Hibiscus Coast Highway and 800m northwest of Haigh Access Road.
- Section 4: East Coast Road between 800m northwest of Haigh Access Road and Okura River Road.
- Section 5: East Coast Road between Okura River Road and Glenvar Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on East Coast Road, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Section 1	Section 2	Section 3
	This section connects to Newman Road and Spur Road to the west and Stillwater Drive to the east. This road provides access to residential properties and is approximately 0.07 km in length.	This section connects to Newman Road and Spur Road to the west and Stillwater Drive to the east. This road provides access to residential properties and is approximately 0.94 km in length.	This section connects to Bawden Road, Ara Weiti Road, Jackson Way to the west and Wilks Road to the east. This road provides access to residential properties and is approximately 5.36 km in length.
	East Coast Road is classified as an Arterial Road under the one network road	East Coast Road is classified as an Arterial Road under the one network road classification	East Coast Road is classified as an Arterial Road under the one network road

Requirement	Comments		
	classification (ONRC). East Coast Road is a two-way, divided non-traversable road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	(ONRC). East Coast Road is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	classification (ONRC). East Coast Road is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  East Coast Road is identified as one of the top 10% DSI saving network sections for New Zealand.	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020  : two minor and four non-injury crashes and therefore Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered	WK NZTA's Crash Analysis System (CAS) records thirty-two crashes between 2016 and 2020  : five serious, eleven minor and sixteen non-injury crashes. This resulted in five Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  East Coast Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for East Coast Road were determined using MegaMaps tool/ a combination of site drive-over footage and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-non-traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use for all sections of East Coast Road is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>a Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>		

Requirement	Comments		
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7,162 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 7,162 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 8,508 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.		

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 4	Section 5
	This section connects to Rodeo Drive to the east, Awanohi Road and John Brian Drive to the west, Redvale Rise to the south and Haigh Access Road to the north.	This section connects to Lonely track Road to the south, Glenvar Road and Okura River Road to the north.
	This road provides access to residential properties and is approximately 3.67 km in length.	This road provides access to residential properties and is approximately 0.66 km in length.

Requirement	Comments	
	East Coast Road is classified as an Arterial Road under the one network road classification (ONRC).	East Coast Road is classified as an Arterial Road under the one network road classification (ONRC).
	East Coast Road is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	East Coast Road is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records forty-five crashes between 2016 and 2020  : one fatal, four serious, thirteen non-injury and twenty-three non-injury crashes. This resulted in five Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	NZTA's Crash Analysis System (CAS) records fifteen crashes between 2016 and 2020  : two minor and thirteen non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for East Coast Road were determined using MegaMaps tool/ a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as	Average daily traffic (ADT) was determined from MegaMaps as

Requirement	Comments	
	9,618 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	11,247 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to			
Current speed limit	Section 1	Section 2	Section 3
	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of East Coast Road has a mean operating speed in the range of 71.68 km/h.	This section of East Coast Road has a mean operating speed in the range of 71.68 km/h.	This section of East Coast Road has a mean operating speed in the range of 82.27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Goldwater Drive:</b> 50 km/h</li> <li>• <b>Tavern Road:</b> 50 km/h</li> <li>• <b>Stillwater Diver:</b> 50 km/h</li> <li>• <b>Newman Road:</b> 100 km/h</li> <li>• <b>Spur Road:</b> 80 km/h</li> <li>• <b>Wilks Road:</b> 100 km/h</li> <li>• <b>Jackson Way:</b> 100km/h</li> <li>• <b>Worsnop Way:</b> 100 km/h</li> <li>• <b>Ara Weiti Road:</b> 60 km/h</li> <li>• <b>Bawden Road:</b> 80km/h</li> </ul>		

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	Repeat

MegaMaps Mean Operating Speed (km/h)	This section of East Coast Road has a mean operating speed in the range of 73.67 km/h.	This section of East Coast Road has a mean operating speed in the range of 66 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Haigh Access Road:</b> 80 km/h</li> <li>• <b>Redvale Rise:</b> 100 km/h</li> <li>• <b>Awanohi Road:</b> 100 km/h</li> <li>• <b>Rodeo Drive:</b> 80 km/h</li> <li>• <b>John Brian Drive:</b> 80 km/h</li> <li>• <b>Okura River Road:</b> 80 km/h</li> <li>• <b>Lonely Track Road:</b> 50 km/h</li> <li>• <b>Glenvar Road:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	5
Corridor Length (km)	0.07	0.94	5.36
Annual Daily Traffic	7,162	7,162	8,508

Required Information for safety metrics calculations	Section 4	Section 5
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	5	0
Corridor Length (km)	3.67	0.66
Annual Daily Traffic	9,618	11,247

**Section 1:**

- The Collective Risk score is **0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0**. For Rural areas this corresponds to a Personal Risk band of **Low**

**Section 2:**

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Section 3:**

- The Collective Risk score is **0.18**. For Rural areas this corresponds to a Collective Risk band of **Medium-High**.
- The Personal Risk score is **6.00**. For Rural areas this corresponds to a Personal Risk band of **Medium**.

**Section 4:**

- The Collective Risk score is 0.27. For Rural areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is 7.76. For Rural areas this corresponds to a Personal Risk band of **Medium-High**.

**Section 5:**

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- the Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1.0	Straight	1.0	Curved	1.8
Carriageway width	Medium lane, Wide shoulder	1.79	Medium lane, Wide shoulder	1.79	Medium lane, Wide shoulder	1.79
Roadside hazards	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	1 to <2	1.2	1 to <2	1.2
Access density (per km)	10 to <20	1.1	10 to <20	1.1	5 to <10	1.06
Traffic volume	6000 to <12000	2.2	6000 to <12000	2.2	6000 to <12000	2.2

Feature	Section 4		Section 5	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Medium lane, Wide shoulder	1.0	Medium lane, Wide shoulder	1.0
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	3 to <5	1.5
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	6000 to <12000	2.2	>12000	3.0

**Section 1:**

- o The Infrastructure Risk Rating Score is **1.63**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Section 2:**

- o The Infrastructure Risk Rating Score is **1.63**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Section 3:**

- o The Infrastructure Risk Rating Score is **1.87**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Section 4:**

- o The Infrastructure Risk Rating Score is **1.88**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Section 5:**

- o The Infrastructure Risk Rating Score is **2.13**. For Rural areas this corresponds to an IRR band of **High**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

Section 2,3,4 &5: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation*

- 60 km/h East Coast Road between 330 m south of Tavern Road and 400 m south of Tavern Road. (Section 1)
- 80 km/h East Coast Road between 400m south of Tavern Road and 1700m south of Hibiscus Coast Highway. (Section 2)- no change )- no change
- 80 km/h East Coast Road between 1700m south of Hibiscus Coast Highway and 800m northwest of Haigh Access Road. (Section 3)
- 80 km/h East Coast Road between 800m northwest of Haigh Access Road and Okura River Road. (Section 4) - no change
- 80 km/h East Coast Road between Okura River Road and Glenvar Road. (Section 5) )- no change

The proposed speed is a challenging conversation as the existing mean operating speed of East Coast Road section 1 is higher than the recommended speed limit of 60 km/h. However this section of East Coast Road is becoming urbanised and the new development will change the existing road environment. The residential developments are likely to reduce the operating speed, hence physical interventions are not required at this stage.

East Coast Road section 3 is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit.

Engineering up of East Coast Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h for section1 and 80 km/h for section 3 was selected for East Coast Road due to a multitude of factors. These being the medium lane and very narrow/wide shoulder width, straight/curved nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium to High' IRR score, making it a high-risk road and due to adverse crash history on the road.

Crash history from NZTA's CAS database shows one hundred and fifteen crashes in the last 5 years including one fatal, ten serious, thirty-seven minor, and sixty-seven non-injury crashes.

After considering all of the above factors, the existing speed limit for section 1 and 3 of 80 & 100 km/h respectively on East Coast Road in Hibiscus and Bays, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for East Coast Road section 1 and 3 are 60 km/h and 80 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – East Tamaki Road (Otarā)

East Tamaki Road, Otara, is divided into seven sections as follows:<sup>1</sup>

- Section 1: East Tamaki Road between Huia Road and SH1 On/Off Ramp
- Section 2: East Tamaki Road between SH1 On/Off Ramp and Preston Road
- Section 3: East Tamaki Road between Preston Road and Springs Road
- Section 4: East Tamaki Road between Springs Road and 'The Depot' Main Entrance
- Section 5: East Tamaki Road between 'The Depot' Main Entrance and Accent Drive
- Section 6: East Tamaki Road between Accent Drive and Paul Stevenson Place
- Section 7: East Tamaki Road between Paul Stevenson Place and Craigavon Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on East Tamaki Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	East Tamaki Road connects to East Tamaki Road, Holroyd Place, Huia Road, Fulton Crescent, Bairds Road, Ferguson Road, East Tamaki Road Service Lane, Preston Road to the south, Birmingham Road to the east, Johnstone Road to the west and Otara Road, Newbury Street, Bairds Road, Hills Road and Springs Road to the north. This road provides access to commercial and residential properties.		
	This section is approximately 0.78 km in length. It is classified as a Regional road under the one network road	This section is approximately 1.87 km in length. It is classified as a Regional road under the one network road	This section is approximately 0.74 km in length. It is classified as a Regional (road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	classification (ONRC).	classification (ONRC).	
	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>twenty-four</b> crashes between 2016 and 2020: zero fatal, zero serious, five minor and nineteen non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>two hundred and ten</b> crashes between 2016 and 2020: zero fatal, eight serious, thirty-four minor and hundred and sixty-eight non-injury crashes. This resulted in eight Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>fifty-four</b> crashes between 2016 and 2020: zero fatal, four serious, nine minor and forty-one non-injury crashes. This resulted in four Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of East Tamaki Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<ul style="list-style-type: none"> <li><b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<p>Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</p> <p><b>Roadside hazards (in both directions):</b> Severe</p>	<ul style="list-style-type: none"> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as <i>"Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32,759 vehicles per day (vpd). This level of traffic volume is consistent with the	Average daily traffic (ADT) was determined from MegaMaps as 26,000 vehicles per day (vpd). This level of traffic volume is consistent with the	Average daily traffic (ADT) was determined from MegaMaps as 25,147 vehicles per day (vpd). This level of traffic volume is consistent with the

Requirement	Comments		
	Section 1	Section 2	Section 3
	nature of the road and traffic survey.	nature of the road and traffic survey.	nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes		

Requirement	Comments	
	Section 4	Section 5
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	East Tamaki Road connects to Springs Road and East Tamaki Road to the west and Accent Drive and East Tamaki Road to the east. This road provides access to commercial properties.	
	This section is approximately 0.39 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 0.57 km in length. It is classified as a Regional road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>two</b> crashes between 2016 and 2020: zero fatal, zero serious, zero minor and two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash	WK NZTA's Crash Analysis System (CAS) records <b>nine</b> crashes between 2016 and 2020: zero fatal, two serious, two minor and five non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all

Requirement	Comments	
	Section 4	Section 5
	risk for all road users were considered.	road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of East Tamaki Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "	The adjacent land use is classified as Controlled Access using on-site information and geomaps. The IRR defines Controlled Access as " <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,895 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3,895 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were	

Requirement	Comments	
	Section 4	Section 5
	received and considered for investigation. The local board was generally supportive of the speed limit changes	

Requirement	Comments	
	Section 6	Section 7
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	East Tamaki Road connects to East Tamaki Road and Accent Drive to the west and Craigavon Drive to the east. This road provides access to commercial and residential properties.	
	This section is approximately 0.19 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.40 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	Repeat
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records <b>three</b> crashes between 2016 and 2020: zero fatal, <b>zero</b> serious, <b>zero</b> minor and three non-injury crashes. This resulted in <b>zero</b> Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.

Requirement	Comments	
	Section 6	Section 7
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of East Tamaki Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 -3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	<p>The adjacent land use is classified as Controlled access using MegaMaps tool. The IRR defines Controlled access as "Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."</p>	<p>The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</p>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	<p>Average daily traffic (ADT) was determined from MegaMaps as 1,903 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 1,903 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>
(i) any planned modification to the road; and	<p>There are no planned modifications currently.</p>	
(j) the views of interested persons and groups.	<p>Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes</p>	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 40.74 km/h.	This section has a mean operating speed of 41.96 km/h.	This section has a mean operating speed of 46.06 km/h.
AT also had regard to	Section 4	Section 5	
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	
MegaMaps Mean Operating Speed	This section of has a mean operating speed of 45.46 km/h.	This section of has a mean operating speed of 53km/h.	
AT also had regard to	Section 6	Section 7	
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 31 km/h.	This section has a mean operating speed of 36.7 km/h.	
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads (for Section 1 to Section 7) are:</p> <ul style="list-style-type: none"> <li>• East Tamaki Road: 50 km/h</li> <li>• Holroyd Place: 50 km/h</li> <li>• Huia Road: 50 km/h</li> <li>• Fulton Crescent: 50 km/h</li> <li>• Bairds Road: 50 km/h</li> <li>• Ferguson Road: 50 km/h</li> <li>• East Tamaki Road Service Lane: 60 km/h</li> <li>• Preston Road: 50 km/h</li> <li>• Birmingham Road: 50 km/h</li> <li>• Johnstone Road: 50 km/h</li> <li>• Otara Road: 50 km/h</li> <li>• Newbury Street: 50 km/h</li> <li>• Hills Road: 50 km/h</li> <li>• Springs Road: 60 km/h (proposed 50 km/h)</li> <li>• Accent Drive: 60 km/h (proposed 50 km/h)</li> <li>• Craigavon Drive: 50 km/h</li> </ul>		

**Step 2: Determine the road safety metrics**

	<b>Data</b>
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Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	5	42	13
DSI crashes during the period	0	8	4
Corridor Length (km)	0.78	1.87	0.74
Annual Daily Traffic	32,759	26,000	25,147
Required Information for safety metrics calculations	Data		
	Section 4	Section 5	
Crash Analysis Period (years)	5	5	
Total injury crashes during period	0	4	
DSI crashes during the period	0	2	
Corridor Length (km)	0.39	0.57	
Annual Daily Traffic	3,895	3,895	
Required Information for safety metrics calculations	Data		
	Section 6	Section 7	
Crash Analysis Period (years)	5	5	
Total injury crashes during period	0	0	
DSI crashes during the period	0	0	
Corridor Length (km)	0.19	0.40	
Annual Daily Traffic	1,903	1,903	

- Section 1:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2:
  - The Collective Risk score is 0.86. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 9.01. For urban areas this corresponds to a Personal Risk band of **High**
- Section 3:
  - The Collective Risk score is 1.08. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 11.76. For urban areas this corresponds to a Personal Risk band of **High**

- Section 4:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 5:
  - The Collective Risk score is 0.70. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 49.19. For urban areas this corresponds to a Personal Risk band of **High**
- Section 6:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 7:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40	Divided-traversable	3.00	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Wide lane, Very narrow shoulder	1.58	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Severe	2.80	Moderate	1.43
Adjacent land use	Urban residential	3.00	Urban residential	3.00	Commercial big box	4.00
Intersection density (per km)	2 to <3	1.30	3 to <5	1.50	5 to <10	2.60
Access density (per km)	>20	1.30	>20	1.30	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00
Feature	Section 4			Section 5		

	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Wide lane, Very narrow shoulder	1.58
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Commercial big box	4.00	Controlled access	2.00
Intersection density (per km)	2 to <3	1.30	1 to <2	1.20
Access density (per km)	>20	1.30	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40
Feature	Section 6		Section 7	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80
Adjacent land use	Controlled access	2.00	Urban residential	3.00
Intersection density (per km)	>10	5.00	5 to <10	2.60
Access density (per km)	10 to <20	1.10	>20	1.30
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 2.01. For urban areas this corresponds to an IRR band of **Medium**.

- Section 2
  - The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.55. For urban areas this corresponds to an IRR band of **Medium-High**
- Section 4
  - The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**
- Section 5
  - The Infrastructure Risk Rating Score is 1.64. For urban areas this corresponds to an IRR band of **Low-Medium**
- Section 6
  - The Infrastructure Risk Rating Score is 2.36. For urban areas this corresponds to an IRR band of **Medium**
- Section 7
  - The Infrastructure Risk Rating Score is 2.42. For urban areas this corresponds to an IRR band of **Medium-High**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1, 2, 3, 4, 5, 6 and 7: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on East Tamaki Road between Huia Road and SH1 On/Off Ramp (section 1)
- 50 km/h on East Tamaki Road between SH1 On/Off Ramp and Preston Road (section 2)
- 50 km/h on East Tamaki Road between Preston Road and Springs Road (section 3)
- 50 km/h on East Tamaki Road between Springs Road and 'The Depot' Main Entrance (section 4)
- 50 km/h on East Tamaki Road between 'The Depot' Main Entrance and Accent Drive (section 5)
- 50 km/h on East Tamaki Road between Accent Drive and Paul Stevenson Place (section 6)
- 50 km/h on East Tamaki Road between Paul Stevenson Place and Craigavon Drive (section 7)

East Tamaki Road is a self-explaining road as the mean operating speeds is below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of East Tamaki Road were considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h were selected for East Tamaki Road sections 1, 2, 3, 4, 5, 6 and 7 due to a multitude of factors. These being the very narrow shoulder width, severe road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score on certain sections. The collective and personal risk of this road are classified as '**High**' and '**High**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Crash history from WK NZTA's CAS database shows three hundred and two crashes in the last 5 years including zero fatal, fourteen serious, fifty minor, and two hundred thirty-eight non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on the full section of East Tamaki Road in Otara, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for East Tamaki Road is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Edward Jonkers Drive (Riverhead)**

The speed limit on Edward Jonkers Drive, Riverhead has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edward Jonkers Drive connects to Lloyd Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 0.87 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Edward Jonkers Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Low.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 145 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 31.67 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lloyd Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.87
Annual Daily Traffic	145

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Low	0.4
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **0.96**. For Rural areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h Edward Jonkers Drive (Full length).*

Edward Jonkers Drive is a self-explaining road as the mean operating speeds (31.67 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Edward Jonkers Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Edward Jonkers Drive due to multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, low roadside hazards and low mean operating speeds. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 80 km/h on Edward Jonkers Drive in Riverhead, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Favona Road (Favona)

The speed limit on Favona Road, Favona has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Favona Road connects to Walmsley Road and Robertson Road to the west, Norana Avenue to the north, James Fletcher Drive and Savill Drive to the east and Dewhurst Place, Harania Avenue and Forbes Road to the south. This road provides access to residential properties and commercial centres.</p> <p>This section is approximately 1.69 km in length. It is classified as a Regional road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records sixty-five crashes between 2016 and 2020: zero fatal, three serious, eleven minor and fifty-one non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Favona Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Favona Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Narrow shoulder (0.5 to 1.0 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated</i>

Requirement	Comments
	<i>by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 24,390 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Walmsley Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Robertson Road:</b> 50 km/h.</li> <li><b>James Fletcher Drive:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Savill Drive:</b> 50 km/h.</li> <li><b>Harania Ave:</b> 50 km/h.</li> <li><b>Forbes Road:</b> 50 km/h.</li> <li><b>Dewhurst Avenue:</b> 50 km/h.</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	14
DSI crashes during the period	3
Corridor Length (km)	1.69
Annual Daily Traffic	24,390

- The Collective Risk score is **0.36**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **4.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Wide lane, Narrow shoulder	1.18
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.30
Traffic volume	>12000	3.0

The Infrastructure Risk Rating Score is **2.33**. For Urban areas this corresponds to an IRR band of Medium.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 50 km/h Favona Road (Full Length).*

Favona Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Favona Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Favona Road due to multitude of factors. These being narrow shoulder width, high roadside hazards and urban residential land use. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Due to adverse crash history on the road. The collective and personal risk of this road are classified as **'High'** and **'Low'** respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> Favona Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows sixty-five crashes in the last 5 years including zero fatal, three serious, eleven minor, and fifty-one non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Favona Road in Favona, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Fitzroy Street (Ponsonby)

The speed limit on Fitzroy Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fitzroy Street connects Douglas Street to the north, Brown Street to the east and west and Richmond Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.61 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Fitzroy Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Douglas Street:</b> 50 km/h (proposed 30 km/h).</li> <li><b>Richmond Road:</b> 50 km/h</li> <li><b>Brown Street:</b> 50 km/h (proposed 30 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.16
Annual Daily Traffic	156

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	>10	5.00
Access density (per km)	>20	1.30
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **2.46**. For Urban areas this corresponds to an IRR band of Medium-High.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h Fitzroy Street (Full Length)*

Fitzroy Street is a self-explaining road as the mean operating speeds (20 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Fitzroy Street was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this street due to multitude of factors. These being medium lane width, very narrow shoulder width, straight nature of road, high roadside hazards and low mean operating speeds (<30 km/h). All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 50 km/h on Fitzroy Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Fitzroy Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Flintridge Drive (Flat Bush)

The speed limit on Flintridge Drive, Flat Bush (between 34m and 57m north of Ormiston Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Flintridge Drive connects to Flintridge Drive to the north and south. This road provides access to residential properties.
	This section is approximately 0.02 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadides; and	The following characteristics for each section of Flintridge Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 234 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed of 20km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Flintridge Drive (south):</b> Variable Speed Zone – 40km/h &amp; 60km/h</li> <li>• <b>Flintridge Drive (north):</b> 50 km/h</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.02
Annual Daily Traffic	234

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	<1	1.00
Access density (per km)	<1	1.00
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is **1.45**. For urban areas this corresponds to an IRR band of **Low**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h for this length of Flintridge Drive, Flat Bush between 34m and 57m north of Ormiston Road.*

Flintridge Drive is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Flintridge Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for this section of Flintridge Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, and low mean operating speed. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all of the above factors, the existing speed limit of 60 km/h on Flintridge Drive in Flat Bush, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Flintridge Drive is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but are considered appropriate as it align with the proposed speed limit along Ormiston Road and the rest of Flintridge Drive.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Goldwater Drive (Silverdale)

The speed limit on Goldwater Drive, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Goldwater Drive connects to Small Road to the west and East Coast Road to the east. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Goldwater Drive is classified as an Access road under the one network road classification (ONRC). Goldwater Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Goldwater Drive were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following characteristics for Goldwater Drive were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.</p> <p>Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Goldwater Drive has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>East Coast Road: 60km/h</li> <li>Small Road: 50 km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

The following characteristics for Goldwater Drive were estimated using MegaMaps tool :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

Goldwater Drive is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Goldwater Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Goldwater Drive is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Grand Drive (Orewa)**

The speed limit on Grand Drive, Orewa (between 410m west of Flavell Drive and State Highway 1) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Grand Drive connects to the Northern motorway to the west. This road provides access to residential properties.
	This section is approximately 0.46 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	Grand Drive is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020</p> <p>: one fatal, zero serious, one minor crash and zero non-injury. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Grand Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as a "Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,000 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed	This section of Grand Drive has a mean operating speed of 56.2 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Northern Motorway:</b> 100 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	1
Corridor Length (km)	0.46
Annual Daily Traffic	6,000

- The Collective Risk score is **0.43**. For Urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **19.98**. For Urban areas this corresponds a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Wide shoulder	1.0
Roadside hazards	High	2.28
Adjacent land use	Controlled access	2.0
Intersection density (per km)	2 to <3	1.3
Access density (per km)	<1	1.0
Traffic volume	6000 to <12000	2.2

The Infrastructure Risk Rating Score is **1.75**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 60 km/h for the Grand Drive between 410m west of Flavell Drive and State Highway 1.

Grand Drive is a self-explaining road as the mean operating speeds (56 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Grand Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Grand Drive due to a multitude of factors. These being the medium lane and wide shoulder width, straight nature of the road, high road-side hazards. Due to adverse crash history on the road. The collective and personal risk of this road are classified as 'High' and 'High' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows two crashes in the last 5 years including one fatal and one minor crash.

After considering all of the above factors, the existing speed limit of 70 km/h on Grand Drive Orewa, is not considered to be a safe and appropriate speed limit for this road.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Great South Road (Manukau)**

Great South Road, Manukau, is divided into three sections as follows: <sup>1</sup>

1. Section 1: Great South Road between Reagan Road and Te Irirangi Drive.
2. Section 2: Great South Road between Te Irirangi Drive and Lakewood Ct.
3. Section 3: Great South Road between Lakewood Ct and Orams Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Great South Road, Manukau has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Great South Road connects to Reagan Road, Great South Road and Puhinui Road to the north, Ryan Place, Cavendish Drive, Ronwood Avenue, Manukau Station Road, Kerrs Road and Superclinic Road to the west, Te Irirangi Drive, Bakerfield Place, Gladding Place, Redoubt Road, Lakewood Court, Pacific Events Centre Drive, Rata Vine Drive, Totara Meadows Court and Costar Place to the east and Orams Road, Browns Road and Great South Road to the south. This road provides access to commercial and residential properties.		
	This section is approximately 0.69 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.95 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 1.81 km in length. It is classified as an Arterial road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, four-lane, divided road. There are pedestrian amenities, cyclist amenities and on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>seventy-two</b> crashes between 2016 and 2020: zero fatal, six serious, nine minor and fifty-seven non-injury crashes. This resulted in six Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>thirty-six</b> crashes between 2016 and 2020: one fatal, five serious, fourteen minor and hundred and sixteen non-injury crashes. This resulted in six Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>hundred and thirty-nine</b> crashes between 2016 and 2020: one fatal, five serious, twenty-nine minor and hundred and four non-injury crashes. This resulted in six Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Great South Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Great South Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both</b></li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<b>directions):</b> High	<b>directions):</b> High	<b>directions):</b> High
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 18,151 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 27,061 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 23,087 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments		
	Section 1	Section 2	Section 3
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 40.08 km/h.	This section has a mean operating speed of 34.03 km/h.	This section has a mean operating speed of 47.2 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Great South Road (north): 50 km/h</li> <li>Great South Road (south): 50 km/h</li> <li>Reagan Road: 50 km/h</li> <li>Puhinui Road: 50 km/h</li> <li>Ryan Place: 50 km/h</li> <li>Cavendish Drive: 60 km/h (proposed 50 km/h)</li> <li>Ronwood Avenue: 50 km/h</li> <li>Manukau Station Road: 60 km/h (proposed 50 km/h)</li> <li>Kerrs Road: 60 km/h (proposed 50 km/h)</li> <li>Superclinic Road: 60 km/h</li> <li>Te Irirangi Drive: 60 km/h (proposed 50 km/h)</li> <li>Bakerfield Place: 50 km/h</li> <li>Gladding Place: 50 km/h</li> <li>Redoubt Road: 50 km/h</li> <li>Lakewood Court: 50 km/h</li> <li>Pacific Events Centre Drive: 50 km/h</li> <li>Rata Vine Drive: 50 km/h</li> <li>Totara Meadows Court: 50 km/h</li> <li>Costar Place: 50 km/h</li> <li>Orams Road: 50 km/h</li> <li>Browns Road: 50 km/h</li> </ul>		

**Step 2: Determine the road safety metrics**

	Data

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	15	20	35
DSI crashes during the period	6	6	6
Corridor Length (km)	0.69	0.95	1.81
Annual Daily Traffic	18,151	27,061	23,087

- Section 1
  - The Collective Risk score is 1.75. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 26.40. For urban areas this corresponds to a Personal Risk band of **High**
- Section 2
  - The Collective Risk score is 1.27. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 12.83. For urban areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.66. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 7.89. For urban areas this corresponds to a Personal Risk band of **Medium-High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40	Divided-traversable	3.00	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Commercial big box	4.00	Commercial big box	4.00	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50	5 to <10	2.60	3 to <5	1.50

Access density (per km)	>20	1.30	10 to <20	1.10	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.51. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.88. For urban areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.64. For urban areas this corresponds to an IRR band of **Medium-High**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Great South Road between Reagan Road and Te Irirangi Drive (section 1)
- 50 km/h on Great South Road between Te Irirangi Drive and Lakewood Ct (section 2)
- 50 km/h on Great South Road between Lakewood Ct and Orams Road (section 3)

Great South Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Great South Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Great South Road due to a multitude of factors. These being the very narrow shoulder width, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'High' IRR score. The collective and personal risk of this road are classified as '**High**' and '**High**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows three hundred and forty-seven crashes in the last 5 years including two fatal, sixteen serious, fifty-two minor, and two hundred and seventy-seven non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Great South Road in Manukau, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Greenwood Road (Mangere)

The speed limit on Greenwood Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Greenwood Road connects to Creamery Road to the north, Island Road to the west and Ascot Road to the south. This road provides access to residential properties.
	This section is approximately 1.35 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities for some part of the road and majority of the road has no pedestrian amenities. There is on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: zero fatal, one serious, one minor and one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Greenwood Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Greenwood Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (1.0 to 2.0 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>

Requirement	Comments
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 56 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Creamery Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Ascot Road:</b> 50 km/h.</li> <li><b>Island Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	1
Corridor Length (km)	1.35

Annual Daily Traffic	2.200
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- The Collective Risk score is **0.15**. For urban areas this corresponds to a Collective Risk band of **Medium-High**.
- The Personal Risk score is **18.31**. For urban areas this corresponds to a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.8
Carriageway width	Medium lane, Wide shoulder	1.0
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	1 to <2	1.20
Access density (per km)	5 to <10	1.06
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **1.98**. For Urban areas this corresponds to an IRR band of Low-Medium.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Greenwood Road (Full Length).*

Greenwood Road is a road which requires challenging conversations and behavioural change from road users in order to introduce a lower yet necessary speed limit. Engineering down/up of Greenwood Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Greenwood Road due to multitude of factors. These being curved nature of the road, high roadside hazards and urban residential land use. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Due to adverse crash history on the road. The collective and personal risk of this road are classified as **'Medium-High'** and **'High'** respectively due to the number of Death and Serious Injury (DSI) crashes,

making it a high-risk road.<sup>1</sup> Greenwood Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows three crashes in the last 5 years including zero fatal, one serious, one minor, and one non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Greenwood Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

As previously mentioned, the cost of engineering down Greenwood Road would substantially outweigh any benefits. Therefore, no physical interventions are proposed for this road. Given that the existing mean operating speed is 64 km/h and higher than the recommended speed limit of 50 km/h, behavioural changes will be required of road users. Informative consultation will be vital to ensuring that the reasoning behind lowering the speed limit is conveyed, as well as ensuring that the new speed limit is adhered to and that the buy-in of local users is achieved.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Greville Road (Pinehill)

Greville Road, Pinehill (between 150m southwest of Hauraki Crescent and Albany Expressway), is divided into two sections as outlined below:

1. Section 1: Greville Road between 150m southwest of Hauraki Crescent and Hugh Green Drive
2. Section 2: Greville Road between Hugh Green Drive and Albany Expressway

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Greville Road, Pinehill has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Greville Road connects to Hugh Green Drive to the south. This road provides access to residential properties and is approximately 0.28 km in length.	Greville Road connects to Northern Motorway and Albany Expressway to the north. This road provides access to residential properties and is approximately 0.81 km in length.
	Greville Road is classified as an Arterial Road under the one network road classification (ONRC). Greville Road is a two-way, divided-non-traversable road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	Greville Road is classified as an Arterial Road under the one network road classification (ONRC). Greville Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: zero fatal, zero serious, zero minor and seven non-injury crashes and therefore no Death and Serious Injury (DSI). This	WK NZTA's Crash Analysis System (CAS) records ninety-nine crashes between 2016 and 2020: zero fatal, one serious, eleven minor and eighty-seven non-injury crashes. This resulted in one Death and Serious Injury

Requirement	Comments	
	data includes crashes for all road users and therefore crash risk for all road users were considered.	(DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  Greville Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Greville Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-non-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as a <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i>	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as a <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20,768 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 20,768 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	

Requirement	Comments
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Greville Road has a mean operating speed of 47.7 km/h.	This section of Greville Road has a mean operating speed in the range of 46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Hugh Green Drive:</b> 50 km/h</li> <li><b>Albany Expressway:</b> 80 km/h</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	12
DSI crashes during the period	0	1
Corridor Length (km)	0.28	0.81
Annual Daily Traffic	20,768	20,768

#### Section 1:

- o The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

#### Section 2:

- o The Collective Risk score is **0.24**. For Urban areas this corresponds to a Collective Risk band of **High**.
- o The Personal Risk score is **3.26**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-non-traversable	1.0	Multi-lane undivided	3.4
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Controlled access	2.0	Controlled access	2.0
Intersection density (per km)	3 to <5	1.5	2 to <3	1.3
Access density (per km)	10 to <20	1.10	1 to <2	1.01
Traffic volume	>12000	3.0	>12000	3.0

#### Section 1:

- o The Infrastructure Risk Rating Score is **1.60**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

#### Section 2:

- o The Infrastructure Risk Rating Score is **2.02**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

For section 1 & 2 of Greville Road the safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation:*

- 50 km/h between 150m southwest of Hauraki Crescent and Hugh Green Drive (Section 1)
- 50 km/h between Hugh Green Drive and Albany Expressway (Section 2)

Greville Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Greville Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for this road due to the land use, medium lane width, narrow/very narrow shoulder width, straight nature of the road and high road side hazards.

Crash history from WK NZTA's CAS database shows ninety-nine crashes in the last 5 years including zero fatal, one serious, eleven minor, and eighty-seven non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Greville Road in Pinehill, is not considered to be a safe and appropriate speed limit for this section of road.

Given that the existing mean operating speed of Greville Road section 1 is 47.7 km/h and section 2 is 46 km/h are close to the recommended speed limit of 50 km/h. In addition, Greville Road is urbanised and with new residential development along this section of the road. Proposed 50 km/h is a safe and appropriate speed limit for this section of road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Haigh Access Lane (Redvale)**

The speed limit on Haigh Access Lane, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Haigh Access Lane connects to Haigh Access Road south. This road provides access to residential properties.</p> <p>This section is approximately 0.2 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Haigh Access Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using MegaMaps tool. The IRR defines Remote Rural as <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 14 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Haigh Access Lane has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Haigh Access Lane:</b> 80 km/h</li> <li>• <b>East Coast Road:</b> 80 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.2
Annual Daily Traffic	14

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Remote rural	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.60**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Haigh Access Lane.*

Haigh Access Lane is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Haigh Access Lane was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Haigh Access Lane due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Haigh Access Lane in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Haigh Access Lane is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Haigh Access Road (Redvale)

The speed limit on Haigh Access Road, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Haigh Access Road connects to Haigh Access Lane to the north and East Coast Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.21 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Haigh Access Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using MegaMaps tool. The IRR defines Remote Rural as <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 476 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Haigh Access Road has a mean operating speed of 36.98 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Haigh Access Lane:</b> 80 km/h</li> <li><b>East Coast Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.21
Annual Daily Traffic	476

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Remote rural	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.60**. For Rural areas this corresponds to an IRR band of **Medium-High**.

#### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

#### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Haigh Access Road.*

Haigh Access Road is a self-explaining road as the mean operating speeds (36.98 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Haigh Access Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Haigh Access Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Haigh Access Road in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Haigh Access Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Harris Road (East Tamaki)**

The speed limit on Harris Road, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harris Road connects to Ti Rakau Drive to the north, Springs Road, Smales Road and Allens Road to the south. This road provides access to commercial properties.</p> <p>This section is approximately 1.84 km in length. It is classified as a regional road under the one network road classification (ONRC).</p> <p>This section is a two-way, four-lane, undivided road. There are pedestrian amenities along this section. There are no cyclist amenities and on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records ninety-two crashes between 2016 and 2020: zero fatal, one serious, eighteen minor and seventy-three non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Harris Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Harris Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Multi-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box

Requirement	Comments
	as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 24,612 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 52.9 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Allens Road:</b> 50 km/h</li> <li>• <b>Springs Road:</b> 50 km/h</li> <li>• <b>Smales Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Crooks Road:</b> 50 km/h</li> <li>• <b>Neales Road:</b> 50 km/h</li> <li>• <b>Greenmount Drive:</b> 50 km/h</li> <li>• <b>Cryers Road:</b> 50 km/h</li> <li>• <b>Nandina Avenue:</b> 50 km/h</li> <li>• <b>Ti Rakau Drive:</b> 60 km/h (proposed 50 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5

Total injury crashes during period	19
DSI crashes during the period	1
Corridor Length (km)	1.84
Annual Daily Traffic	24,612

- The Collective Risk score is 0.11. For urban areas this corresponds to a Collective Risk band of **Medium-High**.
- The Personal Risk score is 1.21. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial big box	4.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume (vpd)	>12000	3.00

The Infrastructure Risk Rating Score is 2.31. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 50 km/h for the full length of Harris Road.

Harris Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Harris Road

was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Harris Road due to a multitude of factors. These being the very narrow shoulder width, commercial big box land use and due to adverse crash history on the road. The collective and personal risk of this road are classified as 'Medium-High' and 'Low' respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows ninety-two crashes in the last 5 years including zero fatal, one serious, eighteen minor, and seventy-three non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Harris Road in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## **Speed Limit Review – Helianthus Avenue (Ormiston)**

The speed limit on Helianthus Avenue, Ormiston (between 45m south of Ormiston Road and 60m south of Ormiston Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Helianthus Avenue connects to Helianthus Avenue to the north/south. This road provides access to residential properties.</p> <p>This section is approximately 0.02 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: zero serious, zero minor and one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Helianthus Avenue were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 24.47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Helianthus Avenue (north):</b> Variable Speed Zone – 40km/h &amp; 60km/h</li> <li>• <b>Helianthus Avenue (south):</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.02
Annual Daily Traffic	50

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	>10	5.00
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.27. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the Helianthus Avenue between 45m and 60m South of Ormiston Road.*

Helianthus Avenue for this section is a self-explaining road as the mean operating speeds (25 km/h) are below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Helianthus Avenue was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Helianthus Avenue due to a multitude of factors. These being the narrow lane and very narrow shoulder width and low mean operating speed (<50 km/h).

Crash history from NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor, and one non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Helianthus Avenue in Ormiston, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Helianthus Avenue is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but are considered appropriate as it align with the proposed speed limit along Ormiston Road and the rest of Helianthus Avenue.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Hibiscus Coast Highway (Waiwera)**

Hibiscus Coast Highway, Waiwera, is divided into six sections as outlined below:

1. Section 1: Hibiscus Coast Highway between Weranui Road and 624m north of Otanerua Road
2. Section 2: Hibiscus Coast Highway between 624m north of Otanerua Road and 450m north of Puriri Ave
3. Section 3: Hibiscus Coast Highway (interchange) between Dairy Flat Highway and 143m west of Jack Hawken Lane
4. Section 4: Hibiscus Coast Highway between 143m west of Jack Hawken Lane and 80 m west of Brian Smith Drive
5. Section 5: Hibiscus Coast Highway between 80 m west of Brian Smith Drive and 100 m north of Whangapararoa Road.
6. Section 6: Hibiscus Coast Highway between 100 m north of Whangapararoa Road and 86m south of Moffat Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hibiscus Coast Highway, Waiwera has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Hibiscus Coast Highway does not connect to any roads along this section of road. This road provides access to residential properties.	Hibiscus Coast Highway connects to Otanerua Road, Hammond Road and Hillcrest Road to the east and Ocean View Road to the west. This road provides access to residential properties.

Requirement	Comments	
	This section is approximately 2.78 km in length. Hibiscus Coast Highway is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 1.89 km in length. Hibiscus Coast Highway is classified as an Arterial Road under the one network road classification (ONRC).
	Hibiscus Coast Highway is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	Hibiscus Coast Highway is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records forty-one crashes between 2016 and 2020</p> <p>: one fatal, three serious, fifteen minor and twenty-two non-injury crashes. This resulted in four Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Yes Hibiscus Coast Highway is identified as one of the top 10% DSI saving network sections for New Zealand.</p>	<p>WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020</p> <p>: zero fatal, zero serious, one minor and three non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Yes Hibiscus Coast Highway is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hibiscus Coast Highway were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Urban Residential as: <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i>
(g) the number of	From MegaMaps tool/ a combination of site drive-over footage and geomaps information.	

Requirement	Comments	
intersections and property accessways; and	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5,554 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 9,313 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul>	Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 3	Section 4
	Hibiscus Coast Highway (interchange) connects to Dairy Flat Highway to the west. This road provides access to residential properties.	Hibiscus Coast Highway connects to Jack Hawken Lane to the north and Painton Road to the south. This road provides access to residential properties.
	This section is approximately 0.27 km in length. Hibiscus Coast Highway (interchange) is classified as a Arterial	This section is approximately 0.64 km in length. Hibiscus Coast Highway is classified as a Primary Collector Road

Requirement		Comments
	road under the one network road classification (ONRC).	under the one network road classification (ONRC).
	Hibiscus Coast Highway (interchange) is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	Hibiscus Coast Highway is a two-way, two-lane, undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records twenty-three crashes between 2016 and 2020</p> <p>: zero fatal, zero serious, two minor and twenty-one non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>	<p>WK NZTA's Crash Analysis System (CAS) records twenty-three crashes between 2016 and 2020</p> <p>: zero fatal, one serious, eight minor and fourteen non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and road sides; and	<p>The following characteristics for Hibiscus Coast Highway were determined using MegaMaps tool/ a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-Lane , undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as: <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i>	The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as: <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool/ a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 10,001	Average daily traffic (ADT) was determined from MegaMaps as 10,001

Requirement		Comments
	vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 5	Section 6
	Hibiscus Coast Highway connects to Brian Smith Drive, Silverdale Street, Wainui Road to the north, East Coast Road, Tavern Road, Titan Place to the south, Millwater Parkway to the west and Whangaparaoa Road to the east. This road provides access to residential properties.	Hibiscus Coast Highway connects to Panorama Bore Access, Taikura Avenue and Greenview Lane to the east, Totara Views Drive, Jelas Drive and Veronica Close to the west. This road provides access to residential properties.
	This is approximately 1.52 km in length. Hibiscus Coast Highway is classified as an Arterial Road under the one network road classification (ONRC).	This is approximately 0.92 km in length. Hibiscus Coast Highway is classified as an Arterial Road under the one network road classification (ONRC).
	Hibiscus Coast Highway is a two-way, Divided traversable road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.	Hibiscus Coast Highway is a two-way, multi-lane undivided road. There is no pedestrian or cyclists' amenities along this road and there is no on-street parking along this section.

Requirement	Comments	
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records seventy-three crashes between 2016 and 2020</p> <p>: one serious, eighteen minor and fifty-four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Yes Hibiscus Coast Highway is identified as one of the top 10% DSI saving network sections for New Zealand.</p>	<p>WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020</p> <p>: three minor and six non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Hibiscus Coast Highway were determined using a combination of site drive-over footage, on-site information and geomaps information.</p>	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	<p>The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as: <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i></p>	<p>The adjacent land use is classified as Controlled Access using MegaMaps tool. The IRR defines Controlled Access as: <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i></p>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool/ a combination of site drive-over footage and geomaps information.</p>	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments	
(h) traffic volume; and	<p>Average daily traffic (ADT) was determined from MegaMaps as 18,139 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 10,001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.</p>
(i) any planned modification to the road; and	<p>There are no planned modifications at this time.</p>	
(j) the views of interested persons and groups.	<p>Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	Section 1	Section 2
	<p>The existing speed limit is 80 km/h.</p>	<p>The existing speed limit is 60 km/h.</p>
MegaMaps Mean Operating Speed (km/h)	<p>This section has a mean operating speed of 62.2 km/h.</p>	<p>This section has a mean operating speed of 61.2 km/h.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Fowler Access Road:</b> 80 km/h</li> <li>• <b>Schischka Road:</b> 100 km/h</li> <li>• <b>Waiwera Road:</b> 50 km/h</li> <li>• <b>Weranui Road:</b> 100km/h</li> <li>• <b>Otanerua Road:</b> 50 km/h</li> <li>• <b>Hammond Avenue:</b> 50 km/h</li> <li>• <b>Hillcrest Road:</b> 50 km/h</li> <li>• <b>Ocean View Road:</b> 50 km/h</li> </ul>	

AT also had regard to		
Current speed limit	Section 3	Section 4
	<p>The existing speed limit is 80 km/h.</p>	<p>The existing speed limit is 70 km/h.</p>

MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed of 58.4 km/h.	This section has a mean operating speed of 51.53 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Dairy Flat Highway:</b> 80 km/h</li> <li>• <b>Jack Hawken Lane:</b> 50 km/h</li> <li>• <b>Painton Road:</b> 50 km/h</li> </ul>	

AT also had regard to		
Current speed limit	Section 5	Section 6
	The existing speed limit is 70 km/h.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hibiscus Coast Highway has a mean operating speed of 56.39 km/h.	This section of Hibiscus Coast Highway has a mean operating speed of 58.47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tavern Road:</b> 60 km/h</li> <li>• <b>Silverdale Street:</b> 50 km/h</li> <li>• <b>Wainui Road:</b> 50 km/h</li> <li>• <b>Titan place:</b> 50 km/h</li> <li>• <b>Whangaparaoa Road:</b> 50 km/h</li> <li>• <b>Millwater Parkway:</b> 50 km/h</li> <li>• <b>Panorama Bore Access:</b> 50 km/h</li> <li>• <b>Totara Views Drive:</b> 50 km/h</li> <li>• <b>Jelas Road:</b> 50 km/h</li> <li>• <b>Taikura Avenue:</b> 50 km/h</li> <li>• <b>Greenview Lane:</b> 50 km/h</li> <li>• <b>Veronica Close:</b> 50 km/h</li> <li>• <b>Jelas Road:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	19	1
DSI crashes during the period	4	0
Corridor Length (km)	2.78	1.89
Annual Daily Traffic	5,554	9,313

Required Information for safety metrics calculations	Section 3	Section 4
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	9
DSI crashes during the period	0	1
Corridor Length (km)	0.27	0.64
Annual Daily Traffic	10,001	10,001

Required Information for safety metrics calculations	Section 5	Section 6
Crash Analysis Period (years)	5	5
Total injury crashes during period	19	3
DSI crashes during the period	1	0
Corridor Length (km)	1.52	0.92
Annual Daily Traffic	18,139	10,001

Section 1:

- The Collective Risk score is **0.28** For Rural areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **14.19**. For Rural areas this corresponds to a Personal Risk band of **High**.

Section 2:

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

Section 3:

- The Collective Risk score is **0.13**. For Urban areas this corresponds to a Collective Risk band of **Medium-High**.
- The Personal Risk score is **1.98**. For Urban areas this corresponds to a Personal Risk band of **Low**.

Section 4:

- The Collective Risk score is **0.31**. For Urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **8.53**. For Urban areas this corresponds to a Personal Risk band of **Medium-High**.

Section 5:

- o The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **1.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

Section 6:

- o The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Wide shoulder	1.0
Roadside hazards	Severe	2.8	Severe	2.8
Adjacent land use	Rural residential	1.5	Controlled access	2.0
Intersection density (per km)	<1	1.0	2 to <3	1.3
Access density (per km)	2 to <5	1.03	10 to <20	1.1
Traffic volume	1000 to <6000	1.4	6000 to <12000	2.2

Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.4	Multi-lane undivided	3.4

Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.79	Medium lane, Narrow shoulder	1.79
Roadside hazards	High	2.28	Moderate	1.43
Adjacent land use	Controlled access	2.0	Controlled access	2.0
Intersection density (per km)	5 to <10	2.6	2 to <3	1.3
Access density (per km)	<1	1.0	5 to <10	1.06
Traffic volume	6000 to <12000	2.2	>12000	3.0

Feature	Section 5		Section 6	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.0	Multi-lane undivided	3.4
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.79	Medium lane, Wide shoulder	1.45
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Controlled access	2.0	Controlled access	2.0
Intersection density (per km)	2 to <3	1.3	5 to <10	2.6
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume	>12000	3.0	6000 to <12000	2.2

Section 1:

- o The Infrastructure Risk Rating Score is **1.86**. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- o The Infrastructure Risk Rating Score is **2.14**. For Urban areas this corresponds to an IRR band of **Medium**.

Section 3:

- o The Infrastructure Risk Rating Score is **2.2**. For Urban areas this corresponds to an IRR band of **Medium**.

Section 4:

- o The Infrastructure Risk Rating Score is **1.84**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

Section 5:

- o The Infrastructure Risk Rating Score is **1.79**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

Section 6:

- o The Infrastructure Risk Rating Score is **1.86**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1 and 3: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

Section 2: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h

Section 4, 5 and 6: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 60 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- *60 km/h on Hibiscus Coast Highway between Weranui Road and 624m north of Otanerua Road (section 1)*
- *50 km/h on Hibiscus Coast Highway between 624m north of Otanerua Road and 450m north of Puriri Ave (section 2)*
- *60 km/h on Hibiscus Coast Highway (interchange) between Dairy Flat Highway and 143m west of Jack Hawken Lane(section 3)*
- *60 km/h on Hibiscus Coast Highway between 143m west of Jack Hawken Lane and 80 m west of Brian Smith Drive(section 4)*
- *60 km/h on Hibiscus Coast Highway between 80 m west of Brian Smith Drive and 100 m north of Whangapararoa Road(section 5)*
- *60 km/h on Hibiscus Coast Highway between 100 m north of Whangapararoa Road and 86m south of Moffat Road(section 6)*

Hibiscus Coast Highway section 1, 3, 4, 5, & 6 are self-explaining roads as the mean operating speeds (62.24, 45.46, 51.53, 56.39 & 58.47 km/h respectively) are below or near the proposed safe and appropriate speeds, despite the existing 80/70 km/h speed limit.

The proposed speed of Hibiscus Coast Highway section 2 is a challenging conversation as the existing mean operating speed is 61.2 km/h and which is higher than the recommended speed limit of 50 km/h. However, this section of Hibiscus Coast Highway is becoming urbanised and the new development will change the existing road environment. The residential developments are likely to reduce the operating speed, hence physical interventions are not required at this stage.

Engineering up of Hibiscus Coast Highway was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50/60 km/h was selected for Hibiscus Coast Highway due to a multitude of factors. These being the medium/narrow lane and shoulder width, straight/curved nature of the road, and severe/high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score for Section 1 of Hibiscus Coast Highway. Due to adverse crash history on the road. The collective and personal risk of this road are classified as 'High', 'Medium-High' and "Low", and "High" and "Medium-High" for section 1, 3 and 4 respectively due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows one hundred and eighty-one crashes in the last 5 years including one fatal, six serious, fifty minor, and one hundred and twenty-four non-injury crashes.

After considering all of the above factors, the existing speed limit of 80, 60, 80, 70, 70 & 70 km/h respectively on Hibiscus Coast Highway section 1, 2, 3, 4, 5 & 6 in Hibiscus and Bays, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit of 60 and 50 km/h for section 1 and 2 is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for section 3,4,5 and 6 Hibiscus Coast Highway is 60 km/h are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (45.46, 51.53, 56.39 & 58.47 km/h respectively).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hingaia Road (Takanini)

The speed limit on Hingaia Road (between 370m east of Oakland Road and Linwood Road), Takanini has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Hingaia Road connects to Oakland Road and Hihiki Road to the north and Towai Road and Linwood Road to the south. This road provides access to residential properties.
	This section is approximately 1.08 km in length. It is classified as a Regional road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities, on-street parking and cyclist amenities along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: zero fatal, one serious, three minor and two non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Hingaia Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hingaia Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be</i>

Requirement	Comments
	<i>the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information. <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7,746 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	New residential development along Hingaia Road.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hingaia Road has a mean operating speed in the range of 64.45km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Oakland Road:</b> 50 km/h</li> <li><b>Hihiki Road:</b> 50 km/h</li> <li><b>Towai Road:</b> 50 km/h</li> <li><b>Linwood Road:</b> 60 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	4
DSI crashes during the period	1
Corridor Length (km)	1.08
Annual Daily Traffic	7,746

- The Collective Risk score is **0.18**. For Rural areas this corresponds to a Collective Risk band of **Medium-High**.

- The Personal Risk score is **6.55**. For Rural areas this corresponds to a Personal Risk band of **Medium**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Wide lane, Wide shoulder	0.85
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	5 to <10	1.06
Traffic volume	6000 to <12000	2.2

The Infrastructure Risk Rating Score is **1.44**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the full length of Hingaia Road.*

A proposed speed limit of 50 km/h was selected for Hingaia Road due to a multitude of factors. These being the wide lane and wide width, straight nature of the road, and moderate road-side hazards. The collective and personal risk of this road are classified as **'Medium-High'** and **'Medium'** respectively due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup> In addition, this section of Hingaia Road is becoming urbanised and therefore will be urban residential in the near future.

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, one serious, three minor, and two non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Hingaia Road in Takanini, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

The proposed speed is a challenging conversation as the existing mean operating speed of Hingaia Road is 64.46 km/h and higher than the recommended speed limit of 50 km/h, however this section of

Hingaia Road is becoming urbanised and the new development will change the existing road environment. The residential developments are likely to reduce the operating speed, hence physical interventions are not required at this stage.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Ian Mckinnon Drive (Eden Terrace)

Ian Mckinnon Drive, Eden Terrace, is divided into two sections as outlined below:

1. Section 1: Ian Mckinnon Drive between Dominion Road and 90 m north of Piwakawaka Street.
2. Section 2: Ian Mckinnon Drive between 90 m north of Piwakawaka Street and Upper Queen St.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Ian Mckinnon Drive, Eden Terrace has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Ian Mckinnon Drive connects to Dominion Road in the south and Piwakawaka Street in the North. This road provides access to residential properties and commercial centres.	This section of Ian Mckinnon Drive connects to Piwakawaka Street in the south and Upper Queen Street in the North. This road provides access to residential properties and commercial centres.
	This section is approximately 0.44 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 0.70 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	This section is a two-way, divided traversable road. There are pedestrian amenities along this road. There are no cyclist amenities.	This section is a two-way, multi-lane undivided road. There are pedestrian amenities along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records fifteen crashes on this section of Ian Mckinnon Drive between 2016	WK NZTA's Crash Analysis System (CAS) records eight crashes on this section of Ian Mckinnon Drive between 2016

Requirement	Comments	
	Section 1	Section 2
	and 2020: three minor and twelve non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	and 2020: one fatal, three serious, two minor and two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	This section of Ian Mckinnon Drive is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ian Mckinnon Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided.</li> <li>• <b>Road alignment:</b> Curved.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled access using MegaMaps tool. The IRR defines Controlled access as "with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<b>Intersection density:</b> 5 to <10 intersections per km. <b>Access density:</b> <1 accesses per km.	<b>Intersection density:</b> 1 to <2 intersections per km. <b>Access density:</b> <1 accesses per km.
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31,200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	
(i) any planned modification to the road; and	There are no planned modifications at this time.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 60 km/h.	
MegaMaps Mean Operating Speed	This section has a mean operating speed of 48.49 km/h.	This section has a mean operating speed of 50.45 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Dominion Road:</b> 60 km/h. (proposed 50 km/h)</li> <li>• <b>Devon Street:</b> 50 km/h.</li> <li>• <b>Piwakawaka Street:</b> 50 km/h.</li> <li>• <b>Upper Queen Street:</b> 50 km/h.</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data	Data
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	4
Corridor Length (km)	0.44	0.70
Annual Daily Traffic	31,200	31,200

- Section 1:
  - The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.
- Section 2:
  - The Collective Risk score is **1.14**. For Urban areas this corresponds to a Collective Risk band of **High**.
  - The Personal Risk score is **10.06**. For Urban areas this corresponds to a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.0	Multi-lane undivided	3.4
Road alignment	Straight	1.0	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Controlled access	2.0	Controlled access	2.0
Intersection density (per km)	5 to <10	2.6	1 to <2	1.2
Access density (per km)	<1	1.0	<1	1.0
Traffic volume	>12000	3.0	>12000	3.0

- Section 1:
  - The Infrastructure Risk Rating Score is **2.07**. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2:
  - The Infrastructure Risk Rating Score is **2.03**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

- Section 1: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.
- Section 2: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h lan Mckinnon Drive: between Dominion Road and 90 m North of Piwakawaka Street (Section 1).
- 50 km/h lan Mckinnon Drive: between 90 m North of Piwakawaka Street and Upper Queen Street (Section 2)

Ian Mckinnon Drive is a self-explaining road as the mean operating speeds (48.49 and 50.45 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Ian Mckinnon Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the first section of this road due to multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, moderate road side hazards and low mean operating speeds (<50 km/h). This section of Ian Mckinnon Drive is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from NZTA's CAS database shows fifteen crashes in the last 5 years on this section of Ian Mckinnon Drive including three minor, and twelve non-injury crashes.

A proposed speed limit of 50 km/h was selected for the second section of this road due to multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, moderate road side hazards and low mean operating speeds (<50 km/h). Due to adverse crash history on the road. Both the collective and personal risk of this road are classified as 'and **High**' due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows eight crashes in the last 5 years on this section of Ian Mckinnon Drive including one fatal, three serious, two minor, and two non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Ian Mckinnon Drive in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h for section 1 and 2 which is aligned with the recommended safe and appropriate speed.

Given that the existing mean operating speed is 60 km/h and higher than the recommended speed limit of 50 km/h, behavioural changes will be required of road users. Informative consultation will be vital to ensuring that the reasoning behind lowering the speed limit is conveyed, as well as ensuring that the new speed limit is adhered to and that the buy-in of local users is achieved.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Ihumatao Quarry Road (Mangere)

The speed limit on Ihumatao Quarry Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ihumatao Quarry Road connects to Oruarangi Road and Landing Drive to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.55 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Ihumatao Quarry Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0) and Very narrow shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 291 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h).	This section has a mean operating speed of 27.56 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Oruarangi Road:</b> 100 km/h (proposed 60 km/h, discussed in Rural marae safe speed programme).</li> <li>• <b>Landing Drive:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.55
Annual Daily Traffic	291

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.20
Access density (per km)	5 to <10	1.06
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.44**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h Ihumatao Quarry Road (Full Length).*

Ihumatao Quarry Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Ihumatao Quarry Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this road due to multitude of factors. These being the narrow lane width, very narrow shoulder width, high roadside hazards and low mean operating speeds (<40 km/h).

After considering all the above factors, the existing speed limit of 100 km/h on Ihumatao Quarry Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Ihumatao Quarry Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (27.56 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Ihumatao Road (Mangere)**

Ihumatao Road, Mangere, is divided into two sections as follows: <sup>1</sup>

- Section 1: Ihumatao Road between George Bolt Memorial Drive to 630m West of Oruarangi Road
- Section 2: Ihumatao Road between 630m West of Oruarangi Road to End

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Ihumatao Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Ihumatao Road connects to George Bolt Memorial Drive to the east, Sistema Way, Te Tiki Road and Oruarangi Road to the north and Renton Road to the south. This road provides access to commercial and residential properties, and is surrounded by farmland.	
	This section is approximately 3.28 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).	This section is approximately 0.64 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is on-street parking along this section. There are no pedestrian and cyclist amenities.	This section is a two-way, two-lane, unsealed road. There is on-street parking along this section. There are no pedestrian and cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>fourteen</b>	WK NZTA's Crash Analysis System (CAS) records <b>one</b>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	crashes between 2016 and 2020: zero fatal, zero serious, five minor and nine non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	crashes between 2016 and 2020: zero fatal, zero serious, zero minor and one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ihumatao Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and very narrow (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow (&lt;3.0 m) and very narrow (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 585 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed of 56.27 km/h.	This section of has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>George Bolt Memorial Drive:</b> 60 km/h</li> <li>• <b>Sistema Way:</b> 50 km/h</li> <li>• <b>Te Tiki Road:</b> 50 km/h</li> <li>• <b>Renton Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Oruarangi Road:</b> 100 km/h</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	5	0
DSI crashes during the period	0	0
Corridor Length (km)	3.28	0.64
Annual Daily Traffic	585	65

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.0
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Moderate	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.20	<1	1.00
Access density (per km)	2 to <5	1.03	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.43. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.61. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Ihumatao Road between George Bolt Memorial Drive to 630m West of Oruarangi Road (section 1)
- 40 km/h on Ihumatao Road between 630m West of Oruarangi Road to End (section 2)

Ihumatao Road is a self-explaining road as the mean operating speeds (56.27 and 20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit.

Engineering up of Ihumatao Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Ihumatao Road section 1 and 40 km/h was selected for Ihumatao Road section 2 due to a multitude of factors. These being the unsealed road surface, narrow lane and shoulder width, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows fifteen crashes in the last 5 years including zero fatal, zero serious, five minor, and ten non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Ihumatao Road in Mangere, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for section 1 is 60 km/h and for section 2 is 40 km/h which are aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Jackson Way (Stillwater)

The speed limit on Jackson Way, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jackson Way connects to Whio Way to the north and East Coast Road to the west. This road provides access to residential properties.</p> <p>Jackson Way is approximately 1.02 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Jackson Way is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: zero fatal, zero serious, zero minor and one non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Jackson Way were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jackson Way has a mean operating speed of 36.2 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Whio Way:</b> 100 km/h (proposed 60 km/h)</li> <li><b>East Coast Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.02
Annual Daily Traffic	297

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.53**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Jackson Way.*

Jackson Way is a self-explaining road as the mean operating speeds (56 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Jackson Way was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Jackson Way due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (<100 km/h).

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor, and one non-injury crash.

After considering all of the above factors, the existing speed limit of 100 km/h on Jackson Way in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Jackson Way is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – James Fletcher Drive (Otahuhu)

The speed limit on James Fletcher Drive, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>James Fletcher Drive connects to Favona Road and Savill Drive to the west, Beach Road to the north and Tui Street and Kahu Street to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.92 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities along this road. There are no cyclist amenities and on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty-four crashes between 2016 and 2020: zero fatal, one serious, two minor and twenty-one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of James Fletcher Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very wide shoulder (&gt; 2.0 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Industry using MegaMaps tool. The IRR defines Industry as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20,793 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 51.98 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Favona Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Savill Drive:</b> 50 km/h.</li> <li>• <b>Tui Street:</b> 50 km/h.</li> <li>• <b>Kahu Street:</b> 50 km/h.</li> <li>• <b>Beach Road:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	0.92
Annual Daily Traffic	20,793

- The Collective Risk score is **0.22**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **2.86**. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	High	2.28
Adjacent land use	Industry	4.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume	>12000	3.00

The Infrastructure Risk Rating Score is **2.35**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h James Fletcher Drive (Full Length).*

James Fletcher Drive is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of James Fletcher Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for James Fletcher Drive due to multitude of factors. These being moderate roadside hazards and industrial land use. This proposed speed was also chosen in order to ensure consistency with the surrounding.

Due to adverse crash history on the road. The collective and personal risk of this road are classified as 'High' and 'Low' respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows twenty-four crashes in the last 5 years including zero fatal, one serious, two minor, and twenty-one non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on James Fletcher Drive in Otahuhu, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – James Paige Lane (Riverhead)**

The speed limit on James Paige Lane, Riverhead has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	James Paige Lane connects to Lloyd Road to the north. This road provides access to residential properties.
	This section is approximately 0.74 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of James Paige Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km.</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 114 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28.76 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lloyd Road:</b> 80 km/h (proposed 60 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.74
Annual Daily Traffic	114

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	5 to <10	1.06
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.64**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h James Paige Lane (Full length).*

James Paige Lane is a self-explaining road as the mean operating speeds (28.76 km/h.) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of James Paige Lane was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for James Paige Lane due to multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road side hazards and low mean operating speeds (<40 km/h). All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 80 km/h on James Paige Lane in Riverhead, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – John Brian Drive (Redvale)

The speed limit on John Brian Drive, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	John Brian Drive connects to East Coast Road to the west. This road provides access to residential properties.
	John Brian Drive is approximately 0.46 km in length. John Brian Drive is classified as a. Access Road under the one network road classification (ONRC).
	John Brian Drive is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of John Brian Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of John Brian Drive has a mean operating speed of 26.19 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>East Coast Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.46
Annual Daily Traffic	52

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.68**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of John Brian Drive.*

John Brian Drive is a self-explaining road as the mean operating speeds (26.19 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of John Brian Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for John Brian Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and high roadside hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on John Brian Drive in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for John Brian Drive is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Kauri Road (Whenuapai)**

The speed limit on Kauri Road, Whenuapai (between 80m north of Brigham Creek Road and 100m south of Kingsway Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kauri Road connects to Brigham Creek Road to the south and Old Kauri Road, Rata Road and Kingsway Road to the north. This road provides access to residential properties.</p> <p>Kauri Road is approximately 2.06 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>Kauri Road is a two-way, two-lane, undivided road. There are no pedestrian amenities and cyclist amenities. There exists on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: zero fatal, zero serious, three minor and three non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadides; and	<p>The following characteristics for each section of Kauri Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist</i>

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,435 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kauri Road has a mean operating speed of 62.8 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Brigham Creek Road:</b> 50 km/h</li> <li>• <b>Old Kauri Road:</b> 70 km/h</li> <li>• <b>Rata Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Kingsway Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	0
Corridor Length (km)	2.06
Annual Daily Traffic	3,435

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	<1	1.0
Access density (per km)	>20	1.3
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is 2.17. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 60 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h Kauri Road between 80m north of Brigham Creek Road and 100m south of Kingsway Road.*

Kauri Road is a self-explaining road as the mean operating speeds (62.8 km/h) are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Riverlea Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kauri Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards.

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, zero serious, three minor and three non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Kauri Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Kea Road (Silverdale)

The speed limit on Kea Road, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kea Road connects to Goldwater Drive to the north and Silverwater Drive to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Kea Road is classified as an Access road under the one network road classification (ONRC). Kea Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kea Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	The following characteristics for Kea Road were estimated using MegaMaps tool. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.  Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kea Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>• Silverwater Drive: 50 km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

The following characteristics for Kea Road were estimated using MegaMaps tool. :

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

Kea Road is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kea Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Kea Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kennedys Road (Whenuapai)

The speed limit on Kennedys Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kennedys Road connects to twin Coast Highway to the south. This road provides access to residential properties.</p> <p>Kennedys Road is approximately 0.41 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>Kennedys Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kennedys Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 69 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kennedys Road has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Twin Coast Highway:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.41
Annual Daily Traffic	69

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is 1.57. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 60 km/h for the full length of Kennedys Road.*

Kennedys Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kennedys Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kennedys Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (<50 km/h).

After considering all the above factors, the existing speed limit of 80 km/h on Kennedys Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Kent Street (Ponsonby)**

The speed limit on Kent Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kent Street connects Lincoln Street to the North and Norfolk Street to the South. This road provides access to residential properties.</p> <p>This section is approximately 0.08 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>This section is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kent Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lincoln Street:</b> 50 km/h. (Proposed 30 km/h).</li> <li>• <b>Norfolk Street:</b> 50 km/h. (Proposed 30 km/h).</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.08
Annual Daily Traffic	156

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	>10	5.00
Access density (per km)	>20	1.30
Traffic volume	<1000	1.40

The Infrastructure Risk Rating Score is **2.26**. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h Kent Street (Full Length)*

Kent Street is a self-explaining road as the mean operating speeds (20 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kent Street was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to multitude of factors. These being narrow lane width, very narrow shoulder width, straight nature of the road, moderate roadside hazards and low mean operating speeds (<30 km/h). This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 50 km/h on Kent Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Kent Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Kerrs Road (Wiri)

Kerrs Road, Wiri, is divided into two sections as outlined below:

1. Section 1: Kerrs Road between Ash Road and Druces Road.
2. Section 2: Kerrs Road between Druces Road and Great South Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit for all sections of Kerrs Road, Wiri have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Kerrs Road connects to Hobill Avenue to the north, Ash Road to the west, Druces Road to the east and Dalgety Drive to the south. This road provides access to residential properties.	Kerrs Road connects to Trevor Hosken Drive and Inverell Avenue to the north, Druces Road to the west and Great South Road and Pacific Events Centre Drive to the east. This road provides access to residential properties.
	This section is approximately 1.15 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	This section is approximately 0.85 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	Kerrs Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	Kerrs Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirty-one crashes on this section of Kerrs Road between 2016 and 2020:	WK NZTA's Crash Analysis System (CAS) records forty crashes on this section of Kerrs Road between 2016 and 2020: zero fatal, three serious, twelve

Requirement	Comments	
	Section 1	Section 2
	zero fatal, one serious, nine minor and twenty-one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	minor and twenty-five non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Kerrs Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kerrs Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 16,998 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 12,991 vehicles per day (vpd).

Requirement	Comments	
	Section 1	Section 2
	This level of traffic volume is consistent with the nature of the road.	This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section of Kerrs Road has a mean operating speed of 49.28 km/h.	This section of Kerrs Road has a mean operating speed of 47.31 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Ash Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Druces Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Hobill Avenue:</b> 50 km/h.</li> <li>• <b>Dalgety Drive:</b> 50 km/h.</li> </ul>	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Druces Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Pacific Events Centre Drive:</b> 50 km/h.</li> <li>• <b>Great South Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Trevor Hosken Drive:</b> 50 km/h.</li> <li>• <b>Inverell Avenue:</b> 50 km/h.</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	10	15
DSI crashes during the period	1	3
Corridor Length (km)	1.15	0.85

Annual Daily Traffic	16,998	12,991
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- Section 1
  - The Collective Risk score is **0.17**. For Urban areas this corresponds to a Collective Risk band of **Medium-High**.
  - The Personal Risk score is **2.80**. For Urban areas this corresponds to a Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is **0.70**. For Urban areas this corresponds to a Collective Risk band of **High**.
  - The Personal Risk score is **14.85**. For Urban areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Wide lane, Very narrow shoulder	1.58	Wide lane, Very narrow shoulder	1.58
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Commercial big box	4.00	Urban Residential	3.00
Intersection density (per km)	1 to <2	1.20	5 to <10	2.60
Access density (per km)	10 to <20	1.10	>20	1.30
Traffic volume	>12000	3.00	>12000	3.00

- Section 1: The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.40. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h. (Section 1).
- The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h. (Section 2).

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendationis*

- 50 km/h Kerrs Road (between Ash Road and Druces Road) (Section 1).
- 50 km/h Kerrs Road (between Druces Road and Great South Road) (Section 2).

Kerrs Road (section 1 and 2) is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Kerrs Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Kerrs Road (Section 1 and 2) due to multitude of factors. These being the very narrow shoulder width, high roadside hazards and commercial big box/controlled access land use.

Due to adverse crash history on the road. The collective and personal risk of this road are classified as 'Medium-High' and 'Low' for section 1 and 'High' for section 2 respectively due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>This proposed speed was also chosen in order to ensure consistency with the surrounding network.Kerrs Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows seventy-one crashes in the last 5 years including zero fatal, four serious, twenty-one minor, and forty-six non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on both the sections of Kerrs Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit on section 1 and section 2 is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## **Speed Limit Review – Kirkbride Road (Mangere Bridge)**

The speed limit on Kirkbride Road, Mangere Bridge (between McKenzie Road and Massey

Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>This section of Kirkbride Road connects to McKenzie Road to the south Masse Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 1.64 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities, cycle amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records thirty-one crashes between 2016 and 2020: zero fatal, four serious, fourteen minor and fifty non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Kirkbride Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kirkbride Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Severe.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated

Requirement	Comments
	<i>by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day'</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps 10570 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 43.7 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kirkbride Road:</b> 60 km/h.</li> <li>• <b>Miller Road:</b> 50 km/h.</li> <li>• <b>Coronation Road:</b> 60 km/h.</li> <li>• <b>Walmsley Road:</b> 60 km/h (proposed 50 km/h).</li> <li>• <b>Tarata Crescent:</b> 50 km/h.</li> <li>• <b>Bader Drive:</b> 50 km/h.</li> <li>• <b>Valiant Street:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	18
DSI crashes during the period	4

Corridor Length (km)	1.64
Annual Daily Traffic	10,570

- The Collective Risk score is **0.48**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **12.64**. For urban areas this corresponds to a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	Severe	2.80
Adjacent land use	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume	>12000	3.00

The Infrastructure Risk Rating Score is **2.38**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h Kirkbride Road (Full Length).*

Kirkbride Road is a self-explaining road as the mean operating speeds is below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Kirkbride Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Kirkbride Road due to multitude of factors. These being severe roadside hazards and low mean operating speeds (<50 km/h).

Due to adverse crash history on the road. Both the collective and personal risk of this road are classified as 'High' due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network. Kirkbride Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows thirty-one crashes in the last 5 years including three serious, eight minor, and twenty non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Kirkbride Road in Mangere Bridge, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Lambie Drive (Manukau)

Lambie Drive, Manukau, is divided into three sections as follows:<sup>1</sup>

- Section 1: Lambie Drive between Puhinui Road and Cavendish Drive
- Section 2: Lambie Drive between Cavendish Drive and Ronwood Ave
- Section 3: Lambie Drive between Ronwood Ave and Wiri Station Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Lambie Drive, Manukau has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Lambie Drive connects to Carruth Road and Puhinui Road to the north, Ihaka Place, Cavendish Drive and Ronwood Avenue to the east, Cavendish Drive to the west and Wiri Station Road and Druces Road to the south. This road provides access to commercial properties.		
	This section is approximately 0.65 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.25 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 0.79 km in length. It is classified as a Regional road under the one network road classification (ONRC).
	This section is a two-way, two-lane, divided road. There are pedestrian amenities, cyclist	This section is a two-way, four-lane, divided road. There are pedestrian amenities and cyclist	This section is a two-way, four-lane, divided road. There are pedestrian amenities and on-street parking

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities and on-street parking along this section.	amenities along this section. There is no on-street parking.	along this section. There are cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>twenty-seven</b> crashes between 2016 and 2020: zero fatal, zero serious, five minor and twenty-two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records thirty-one crashes between 2016 and 2020: zero fatal, zero serious, six minor and twenty-five non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>seventy-six</b> crashes between 2016 and 2020: zero fatal, two serious, sixteen minor and fifty-eight non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Lambie Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big

Requirement	Comments		
	Section 1	Section 2	Section 3
	box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 22,412 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 31,830 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 24,741 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
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Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 42.4 km/h.	This section has a mean operating speed of 40.88 km/h.	This section has a mean operating speed of 43 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Carruth Road: 50 km/h</li> <li>• Puhinui Road: 50 km/h</li> <li>• Ihaka Place: 50 km/h</li> <li>• Cavendish Drive: 60 km/h (proposed 50 km/h)</li> <li>• Ronwood Avenue: 50 km/h</li> <li>• Wiri Station Road: 60 km/h (proposed 50 km/h)</li> <li>• Druces Road: 60 km/h (proposed 50 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	5	6	18
DSI crashes during the period	0	0	2
Corridor Length (km)	0.65	0.25	0.79
Annual Daily Traffic	22,412	31,830	24,741

- Section 1
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.51. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 5.64. For urban areas this corresponds to a Personal Risk band of **Medium**

**Step 3: Calculate the IRR score**

Feature	Section 1	Section 2	Section 3
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	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.00	Divided-traversable	3.00	Divided-traversable	3.00
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80	Severe	2.80
Adjacent land use	Commercial big box	4.00	Commercial big box	4.00	Commercial big box	4.00
Intersection density (per km)	3 to <5	1.50	5 to <10	2.60	5 to <10	2.60
Access density (per km)	>20	1.30	10 to <20	1.10	2 to <5	1.03
Traffic volume (vpd)	>12000	3.00	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.55. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.71. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.68. For urban areas this corresponds to an IRR band of **Medium-High**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Lambie Drive between Puhinui Road and Cavendish Drive (section 1)
- 50 km/h on Lambie Drive between Cavendish Drive and Ronwood Ave (section 2)
- 50 km/h on Lambie Drive between Ronwood Ave and Wiri Station Road (section 3)

Lambie Drive is a self-explaining road as the mean operating speeds (42.4, 40.88 and 43km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Engineering up of Lambie Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Lambie Drive due to a multitude of factors. These being the very narrow shoulder width, severe road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Medium' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows hundred and thirty-four crashes in the last 5 years including zero fatal, two serious, twenty-seven minor, and hundred and five non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Lambie Drive in Manukau, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Lascelles Drive (Dairy Flat)**

The speed limit on Lascelles Drive, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lascelles Drive connects to Wilks Road to the north. This road provides access to residential properties.</p> <p>Lascelles Drive is approximately 0.40 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>Lascelles Drive is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Lascelles Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 135 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lascelles Drive has a mean operating speed of 24.57 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wilks Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.40
Annual Daily Traffic	135

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is 1.49. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Lascelles Drive.*

Lascelles Drive is a self-explaining road as the mean operating speeds (24.57 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Lascelles Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Lascelles Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, and high road-side hazards.

After considering all of the above factors, the existing speed limit of 80 km/h on Lascelles Drive in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Lascelles Drive is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Lennon Access Road (Stillwater)

The speed limit on Lennon Access Road, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lennon Access Road connects to Spur Road to the west. This road provides access to residential properties.</p> <p>Lennon Access Road is approximately 0.81 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Lennon Access Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Lennon Access Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 263 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lennon Access Road has a mean operating speed of 41.15 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Spur Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.81
Annual Daily Traffic	263

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is 1.65. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Lennon Access Road.*

Lennon Access Road is a self-explaining road as the mean operating speeds (41.15 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Lennon Access Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Lennon Access Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, curved nature of the road, and high road-side hazards. All of these factors contribute to the road's **'Medium-High'** IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Lennon Access Road in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Lennon Access Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Lincoln Street (Ponsonby)

The speed limit on Lincoln Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lincoln Street connects Kent Street, Mira Street, Richmond Road and John Street to the South and Ponsonby Road to the North. This road provides access to residential properties.</p> <p>This section is approximately 0.64 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one serious, one minor and one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Lincoln Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist</i>

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,725 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26.18 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Richmond Road:</b> VSL 40 km/h &amp; 50 km/h.</li> <li>• <b>John Street:</b> VSL 40 km/h &amp; 50 km/h.</li> <li>• <b>Ponsonby Road:</b> 40 km/h.</li> <li>• <b>Mira Street:</b> 50 km/h (proposed 30 km/h).</li> <li>• <b>Kent Street:</b> 50 km/h (proposed 30 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	1
Corridor Length (km)	0.65
Annual Daily Traffic	1,725

- The Collective Risk score is **0.31**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **49.32**. For urban areas this corresponds to a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.30
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **2.33**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h Lincoln Street (Full Length)*

Lincoln Street is a self-explaining road as the mean operating speeds (26.18 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Lincoln Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to multitude of factors. These being narrow lane width, very narrow shoulder width, high roadside hazards and low mean operating speeds (<30 km/h). Due to adverse crash history on the road. Both the collective and personal risk of this road are classified as and 'High' due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Crash history from NZTA's CAS database shows three crashes in the last 5 years including one serious, one minor, and one non-injury crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Lincoln Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Lincoln Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (26.18 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Lloyd Road (Riverhead)

The speed limit on Lloyd Road, Riverhead has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lloyd Road connects to Barrett Road to the West, Beacon Road and James Paige Lane to the South and Edwards Jonkers Drive to the East. This road provides access to residential properties.</p> <p>This section is approximately 1.71 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, zero serious, one minor and zero non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Lloyd Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 493 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 44.64 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Barrett Road:</b> 40 km/h.</li> <li>• <b>Barrett Road 80 km/h.</b> (Proposed 60 km/h).</li> <li>• <b>Beacon Road:</b> 40 km/h.</li> <li>• <b>James Paige Lane:</b> 80 km/h. (Proposed 60 km/h).</li> <li>• <b>Edward Jonkers Drive:</b> 80 km/h (Proposed 60 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.71
Annual Daily Traffic	493

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.49**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60km/h Lloyd Road (Full length).*

Lloyd Road is a self-explaining road as the mean operating speeds (44.64 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Lloyd Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this road due to multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high roadside hazards and low mean operating speeds.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, one minor and zero non-injury crashes. .

After considering all the above factors, the existing speed limit of 80 km/h on Lloyd Road in Riverhead, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Mamari Road (Whenuapai)**

The speed limit on Mamari Road, Whenuapai (between 225m south of Brigham Creek Road and Spedding Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mamari Road connects to Spedding Road to the south. This road provides access to residential properties.</p> <p>Mamari Road is approximately 0.53 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>Mamari Road is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mamari Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mamari Road has a mean operating speed of 36.6 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Spedding:</b> 80 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.53
Annual Daily Traffic	147

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Unsealed	10.0
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.96**. For Rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

#### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation: 40km/h Mamari Road between 225m south of Brigham Creek Road and Spedding Road.*

Mamari Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Mamari Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Mamari Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (<50 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 80 km/h on Mamari Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Manukau Station Road (Manukau)

The speed limit on Manukau Station Road, Manukau has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Manukau Station Road connects to Davies Avenue and Osterley Way to the north, Lambie Drive to the west, Great South Road and Redoubt Road to the east, and Wiri Station Road and Barrowcliffe Place to the south. This road provides access to residential properties and commercial centres.</p> <p>This section is approximately 1.03 km in length. It is classified as a Regional road under the one network road classification (ONRC).</p> <p>This section is a two-way, multilane-lane, divided-traversable road. There are pedestrian amenities, cyclist amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>fifty-three</b> crashes between 2016 and 2020: zero fatal, one serious, thirteen minor and thirty-nine non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Manukau Station Road were determined using MegaMaps tool/ a combination of site drive-over footage and GeoMap information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas.</i> "

Requirement	Comments
	<i>Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 11,817 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of value 37.31 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Lambie Drive:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Great South Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Redoubt Road:</b> 50 km/h.</li> <li><b>Davies Avenue:</b> 50 km/h.</li> <li><b>Osterley Way:</b> 50 km/h.</li> <li><b>Wiri Station Road:</b> 60 km/h. (proposed 50 km/h).</li> <li><b>Barrowcliffe Place:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	14
DSI crashes during the period	1
Corridor Length (km)	1.03

Annual Daily Traffic	11,817
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- The Collective Risk score is **0.19**. For Urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **4.50**. For Urban areas this corresponds to a Personal Risk band of **Low-Medium**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Divided-traversable	3.00
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Commercial big box	4.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	5 to <10	1.06
Traffic volume	6000 to <12000	2.20

The Infrastructure Risk Rating Score is **2.47**. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Manukau Station Road (Full Length).*

Manukau Station Road is a self-explaining road as the mean operating speeds (37.31 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Manukau Station Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Manukau Station Road due to multitude of factors. These being very narrow shoulder width, high roadside hazards and low mean operating speeds (<40 km/h). All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as '**High**' and '**Low-Medium**' respectively due the number of Death and

Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows fifty-three crashes in the last 5 years including one serious, thirteen minor, and thirty-nine non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Manukau Station Road in Manukau, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Marsics Street (Glen Innes)

The speed limit on Marsics Street, Glen Innes, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marsics Street connects to Leybourne Circle to the north and Sunnymead Road to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Marsics Street is classified as an Access road under the one network road classification (ONRC). Marsics Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marsics Street were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0 m to &lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Marsics Street has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Leybourne Circle: 50km/h (proposed 30km/h)</li> <li>Aveline Place: 50km/h (proposed 30km/h)</li> <li>Sunnymead Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Marsics Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Marsics Street, the actual operating speed estimated using the MegaMaps tool is: <30 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Massey Road (Mangere)**

The speed limit on Massey Road, Mangere (between State Highway 20 and Naylor's Drive) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Massey Road connects to Thomas Road, Pershore Place, Mascot Avenue, Duggan Avenue, Friesian Drive, Imrie Avenue to the north, Naylor's Drive and Kirkbride Road to the west, State Highway 20 and Massey Road to the east, Plumley Crescent, Peninsula Road, Pukaki Road, Prangley Avenue, Tussock Avenue, Tidal Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 2.10 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records one hundred and twenty crashes between 2016 and 2020: zero fatal, two serious, twenty-three minor and ninety-five non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Massey Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Massey Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very wide shoulder (&gt;2.0 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Severe.</li> </ul>

Requirement	Comments
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 19,580 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 47.18 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Naylor Drive:</b> 50 km/h.</li> <li>• <b>Thomas Road:</b> 50 km/h.</li> <li>• <b>Pershire Place:</b> 50 km/h.</li> <li>• <b>Mascot Avenue:</b> 50 km/h.</li> <li>• <b>Duggan Avenue:</b> 50 km/h.</li> <li>• <b>Friesian Drive:</b> 50 km/h.</li> <li>• <b>Imrie Avenue:</b> 50 km/h.</li> <li>• <b>Plumley Crescent:</b> 50km/h.</li> <li>• <b>Peninsula Road:</b> 50 km/h.</li> <li>• <b>Pukaki Road:</b> 50 km/h.</li> <li>• <b>Prangley Avenue:</b> 50 km/h.</li> <li>• <b>Tussock Avenue:</b> 50 km/h.</li> <li>• <b>Tidal Road:</b> 50 km/h.</li> <li>• <b>Kirkbride Road:</b> 60 km/h.</li> <li>• <b>State Highway 20:</b> 100 km/h.</li> <li>• <b>Massey Road:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	25
DSI crashes during the period	2
Corridor Length (km)	2.10
Annual Daily Traffic	19,580

- The Collective Risk score is **0.19**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **2.67**. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	Severe	2.80
Adjacent land use	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	>20	1.30
Traffic volume	>12000	3.00

The Infrastructure Risk Rating Score is **2.75**. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 50 km/h Massey Road (between State Highway 20 and Naylor Drive).

Massey Road is a self-explaining road as the mean operating speeds are below than the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Massey Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for this section of Massey Road due to multitude of Factors. These being severe roadside hazards and urban residential land use. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Low' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network. Massey Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows one hundred and twenty crashes in the last 5 years including two serious, twenty-three minor, and ninety-five non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Massey Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – McCorquindale Lane (New Lynn)

The speed limit on McCorquindale Lane, New Lynn has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McCorquindale Lane connects to McCrae Way to the north and Totara Avenue to the south. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>McCorquindale Lane is classified as an Access road under the one network road classification (ONRC). McCorquindale Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McCorquindale Lane were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box/Industrial using MegaMaps tool. The IRR defines Commercial Big Box/Industrial as "Large (big box) shops and/or industry/factories with intermittent large access ways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present".

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	The following characteristics for McCorquindale Lane were estimated using MegaMaps tool. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 550 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McCorquindale Lane has a mean operating speed is 20km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Totara Avenue: 50 km/h (proposed 10 km/h)</li> <li>• McCrae Way: 50 km/h (proposed 10 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

The following characteristics for McCorquindale Lane were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 10km/h.*

A proposed speed limit of 10 km/h was selected for this road primarily due to a multitude of factors. These being the Shared Zone and commercial big box land use. The existing speed limit of 50 km/h on McCorquindale Lane in New Lynn is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 10 km/h, which is aligned with the recommended safe and appropriate speed. The existing mean operating speed of McCorquindale Lane is 20 km/h. Although the speed is higher than the recommended speed limit of 10 km/h, the road environment is self-explained as a low speed shared environment. Also, this is aligned with the speed limit at other shared zones. The proposed change of speed limit will be a challenging conversation. Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – McCrae Way (New Lynn)

The speed limit on McCrae Way, New Lynn has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McCrae Way connects Great North Road on the West to Memorial Drive on the East. This road provides access to commercial centre and parking spaces.</p> <p>McCrae Way is approximately 0.19 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>McCrae Way is a two-lane, undivided road. This street is a Shared zone for all road users with on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of McCrae Way were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0m) Very Narrow Shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as "Roads with Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,261 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
Surveyed Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Great North Road:</b> 50 km/h.</li> <li><b>Memorial Drive:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.19
Annual Daily Traffic	2,261

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

## Speed Limit Review – Mckean Road (Whenuapai)

The speed limit on Mckean Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mckean Road connects to Totara Road to the east. This road provides access to residential properties. is approximately 0.44 km in length.</p> <p>Mckean Road is approximately 0.44 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Mckean Road is a two-way, two-lane, undivided road. There are no pedestrian amenities and cyclist amenities. There exists on-street parking along this road</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mckean Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Low</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Commercial big box	4.0
Intersection density (per km)	>10	5.00
Access density (per km)	10 to <20	1.10
Traffic volume	1000 to <6000	1.40

- The Infrastructure Risk Rating Score is **2.92**. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 10 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 10 km/h McCrae Way (Full Length).*

A proposed speed limit of 10 km/h was selected for this road primarily due to a multitude of factors. These being the Shared Zone, narrow lane width, very narrow shoulder width, curved nature of the road, high roadside hazards and commercial big box land use. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 50 km/h on McCrae Way in New Lynn is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 10 km/h, which is aligned with the recommended safe and appropriate speed. The existing mean operating speed of *McCrae Way* is 23 km/h. Although the speed is higher than the recommended speed limit of 10 km/h, the road environment is self-explained as a low speed shared environment. Also, this is aligned with the speed limit at other shared zones. The proposed change of speed limit will be a challenging conversation.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 599 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mckean Road has a mean operating speed of 33.4 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Totara Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.44
Annual Daily Traffic	599

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Low	0.4
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is 0.81. For Rural areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 60 km/h Full length of Mckean Road.*

Mckean Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Mckean Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Mckean Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, low road-side hazards and low mean operating speed (<50 km/h).

After considering all the above factors, the existing speed limit of 80 km/h on Mckean Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Mckenzie Road (Mangere Bridge)

The speed limit on Mckenzie Road, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mckenzie Road connects to Kirkbride Road to the south and Miller Road, Tarata Crescent to the west, Bader Drive and Valiant Street to the east and Coronation Road and Walmsley Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 1.58 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities, cycle amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records thirty-one crashes between 2016 and 2020: zero fatal, three serious, eight minor and twenty non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Mckenzie Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mckenzie Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m).</li> <li><b>Roadside hazards (in both directions):</b> Severe.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular

Requirement	Comments
	<i>intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day'</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps 16,693 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 48.58 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Kirkbride Road:</b> 60 km/h.</li> <li><b>Miller Road:</b> 50 km/h.</li> <li><b>Coronation Road:</b> 60 km/h.</li> <li><b>Walmsley Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Tarata Crescent:</b> 50 km/h.</li> <li><b>Bader Drive:</b> 50 km/h.</li> <li><b>Valiant Street:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	11
DSI crashes during the period	3

Corridor Length (km)	1.58
Annual Daily Traffic	16,693

- The Collective Risk score is **0.38**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **11.71**. For urban areas this corresponds to a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	Severe	2.80
Adjacent land use	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume	>12000	3.00

The Infrastructure Risk Rating Score is **2.38**. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Mckenzie Road (Full Length).*

Mckenzie Road is a self-explaining road as the mean operating speeds is below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Mckenzie Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Mckenzie Road due to multitude of factors. These being severe roadside hazards and low mean operating speeds (<50 km/h).

Due to adverse crash history on the road. Both the collective and personal risk of this road are classified as '**High**' due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network. Mckenzie Road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows thirty-one crashes in the last 5 years including three serious, eight minor, and twenty non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Mckenzie Road in Mangere Bridge, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Memorial Drive (New Lynn)

The speed limit on Memorial Drive, New Lynn (between Great North Road and Totara Avenue) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Memorial Drive connects Great north road on the north to Totara Avenue on the south. This road provides access to commercial centre and parking spaces.</p> <p>Memorial Drive is approximately 0.19 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>Memorial Drive is a two-lane, undivided road. This street is a Shared zone for all road users with on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two non-injury crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Memorial Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0m) Very Narrow Shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as "Roads with Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2900 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
Surveyed Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Great North Road:</b> 50 km/h.</li> <li><b>Totara Avenue:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.19
Annual Daily Traffic	550

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

## Speed Limit Review – Messenger Road (Stillwater)

The speed limit on Messenger Road, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Messenger Road connects to Duck Creek Road to the south. This road provides access to residential properties.</p> <p>Messenger Road is approximately 1.04 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>Messenger Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Messenger Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Commercial big box	4.0
Intersection density (per km)	>10	5.00
Access density (per km)	10 to <20	1.10
Traffic volume	1000 to <6000	1.40

- The Infrastructure Risk Rating Score is **2.92**. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 30 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h Memorial Drive (between Great North Road and Totara Avenue).*

Memorial Drive is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit

A proposed speed limit of 30 km/h was selected for this road primarily due to a multitude of factors. These being the Shared Zone, narrow lane width, very narrow shoulder width, curved nature of the road, high roadside hazards and commercial big box land use. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 50 km/h on Memorial Drive in New Lynn is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 30 km/h, which is aligned with the recommended safe and appropriate speed. The existing mean operating speed of *Memorial Drive* is 20 km/h.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 117 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Messenger Road has a mean operating speed of 44 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Duck Creek Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.04
Annual Daily Traffic	117

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is 1.94. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Messenger Road.*

Messenger Road is a self-explaining road as the mean operating speeds (44 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Messenger Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Messenger Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, and high roadside hazards. All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Messenger Road in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Messenger Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Mira Street (Ponsonby)

The speed limit on Mira Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mira Street connects to connects Lincoln Street to the North and Norfolk Street to the South. This road provides access to residential properties.</p> <p>This section is approximately 0.08 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>This section is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mira Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 78 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Lincoln Street:</b> 50 km/h (proposed 30 km/h).</li> <li><b>Norfolk Street:</b> 50 km/h (proposed 30 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.08
Annual Daily Traffic	78

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	>10	5.00
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **2.39**. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h Mira Street (Full Length)*

Mira Street is a self-explaining road as the mean operating speeds (20 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Mira Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to multitude of factors. These being narrow lane width, very narrow shoulder width, straight nature of the road, high roadside hazards and low mean operating speeds (<30 km/h). This proposed speed was also chosen in order to ensure consistency with the surrounding network.

After considering all the above factors, the existing speed limit of 50 km/h on Mira Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Mira Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

## Speed Limit Review – Mita Road (Silverdale)

The speed limit on Mita Road, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mita Road connects to Goldwater Drive to the north and Silverwater Drive to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Mita Road is classified as an Access road under the one network road classification (ONRC). Mita Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mita Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following characteristics for Mita Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.</p> <p>Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mita Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>Silverwater Drive: 50 km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

The following characteristics for Mita Road were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

Mita Road is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Mita Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Mita Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Murphys Road (Flat Bush)**

Murphys Road, Flat Bush is divided into two sections as follows:<sup>1</sup>

- Section 1: Murphys Road Between Redoubt Road to 150 m south of Flat Bush School Road.
- Section 2: Murphys Road Between Stancombe Road to 80 meter south of Ormiston Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Murphys Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Murphys Road connects to Stancombe Road and Jeffs Road to the north, Redoubt Road to the south, Murphys Park Drive, Flat Bush School Road, Horsefields Drive, Te Kura Road, Bush View Place, Timmer Road, Ormiston Road, Norwood Drive, Birchlands Road to the east and Malahide Drive, Multose Drive, Salford Crescent, Ormiston Road, Geranium Avenue, Kerrykeel Drive, Flat Bush School Road and Thomas Road to the west. This road provides access to residential properties.	
	This section is approximately 1.82 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.92 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities, cyclist facilities and on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities, cyclist facilities and on-street parking along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>forty-one</b> crashes between 2016 and 2020: zero fatal, zero serious, eleven minor and thirty non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>twenty-seven</b> crashes between 2016 and 2020: zero fatal, zero serious, six minor and twenty-one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Murphys Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Murphys Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as	Average daily traffic (ADT) was determined from MegaMaps as

Requirement	Comments	
	Section 1	Section 2
	6,515 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and but it's not consistent with the traffic survey.	12,656 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed/ surveyed 85 <sup>th</sup> percentile speed (km/h)	This section of has a mean operating speed in the range of 56.68 km/h.	This section of has a mean operating speed in the range of 47.27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Redoubt Road:</b> 60 km/h</li> <li>• <b>Thomas Road:</b> 50 km/h</li> <li>• <b>Murphys Park Drive:</b> 50 km/h</li> <li>• <b>Te Kura Road:</b> 50 km/h</li> <li>• <b>Bush View Place:</b> 50 km/h</li> <li>• <b>Flat Bush School Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Horsefields Drive:</b> 50 km/h</li> <li>• <b>Kerrykeel Drive:</b> 50 km/h</li> <li>• <b>Timmer Road:</b> 50 km/h</li> <li>• <b>Geranium Avenue:</b> 50 km/h</li> <li>• <b>Ormiston Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Salford Crescent:</b> 50 km/h</li> <li>• <b>Multose Drive:</b> 50 km/h</li> <li>• <b>Norwood Drive:</b> 50 km/h</li> <li>• <b>Malahide Drive:</b> 50 km/h</li> <li>• <b>Birchlands Road:</b> 50 km/h</li> <li>• <b>Jeffer Road:</b> 50 km/h</li> <li>• <b>Stancombe Road:</b> 60 km/h (proposed 50 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

	<b>Data</b>
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Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	11	6
DSI crashes during the period	0	0
Corridor Length (km)	1.82	0.92
Annual Daily Traffic	6,515	12,656

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### **Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Narrow lane, Narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Urban residential	3.00
Intersection density (per km)	2 to <3	1.30	5 to <10	2.60
Access density (per km)	2 to <5	1.03	>20	1.30
Traffic volume (vpd)	6000 to <12000	2.20	>12000	3.00

- Section 1

- The Infrastructure Risk Rating Score is 1.81. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.66. For rural areas this corresponds to an IRR band of **Medium-High**.

#### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80

Section 2: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

#### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Murphys Road Between Redoubt Road to 150 m south of Flat Bush School Road. (section 1)
- 50 km/h on Murphys Road Between Stancombe Road to 80 meter south of Ormiston Road. (section 2)

Murphys Road (Section 1 & 2) is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 60 km/h and 80 km/h speed limit.

Engineering down/up of Murphys Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60/50 km/h was selected for Section 1 and 2 of Murphys Road respectively due to a multitude of factors. These being the narrow lane and shoulder width and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows seventy-eight crashes in the last 5 years including zero fatal, one serious, eighteen minor, and fifty-nine non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on section 1 and 60 km/h on section 2 of Murphys Road in Flat Bush, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60/50 km/h for section 1 and 2 respectively, which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Newman Road (East) (Stillwater)

The speed limit on Newman Road (east), Stillwater (between Spur Road and 700m west of Spur Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newman Road (east) connects to Spur Road to the south. This road provides access to residential properties.</p> <p>Newman Road is approximately 0.51 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>Newman Road (east) is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Newman Road (east) were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 98 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Newman Road (east) has a mean operating speed of 33.2 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Spur Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.51
Annual Daily Traffic	98

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is 1.78. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h Newman Road (east) (between Spur Road and 700m west of Spur Road).*

Newman Road (east) is a self-explaining road as the mean operating speeds (33.2 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Newman Road (east) was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Newman Road (east) due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and high roadside hazards. All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Newman Road (east) in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Newman Road (east) is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Newman Road (west) (Stillwater)**

Newman Road (west), Stillwater, is divided into one section as follows: <sup>1</sup>

- Section 1: Road Name between East Coast Road and 880m east of East Coast Road.

The speed limit on Newman Road (west), Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newman Road (west) connects to East Coast Road to the east. This road provides access to residential properties and is approximately 0.67 km in length.</p> <p>Newman Road (west) is classified as a Access road under the one network road classification (ONRC). Newman Road (west) is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadides; and	<p>The following characteristics for each section of Newman Road (west) were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be</i>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments
	<i>the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 81 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Newman Road (west) has a mean operating speed of 38 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>East Coast Road:</b> 80 km/h</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.67
Annual Daily Traffic	81

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.75**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for Newman Road (west) (between East Coast Road and 880m east of East Coast Road).*

Newman Road (west) is a self-explaining road as the mean operating speeds (38 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Newman Road (west) was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Newman Road (west) due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and high road-side hazards. All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Newman Road (west) in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Newman Road (west) is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Norfolk Street (Ponsonby)

The speed limit on Norfolk Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Norfolk Street connects to Kent Street and Mira Street to the north, Ponsonby Road to the East and Richmond Road to the West. This road provides access to residential properties.</p> <p>This section is approximately 0.62 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five non-injury crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Norfolk Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 867 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23.63 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ponosonby Road:</b> 40 km/h.</li> <li><b>Richmond Road:</b> VSL 40 &amp; 50 km/h.</li> <li><b>Kent Street:</b> 50 km/h (proposed 30 km/h).</li> <li><b>Mira Street:</b> 50 km/h (proposed 30 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.62
Annual Daily Traffic	867

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.30
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **2.18**. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h Norfolk Street (Full Length)*

Norfolk Street is a self-explaining road as the mean operating speeds are (23.63 km/h) below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Norfolk Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to multitude of factors. These being narrow lane width, very narrow shoulder width, nature of the road, high roadside hazards and low mean operating speeds (<40 km/h). This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from NZTA's CAS database shows five non-injury crashes in the last 5 years.

After considering all the above factors, the existing speed limit of 50 km/h on Norfolk Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Norfolk Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (23.63 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Okura River Road (Okura)

Okura River Road, Okura, is divided into two sections as outlined below:

1. Section 1: Okura River Road between 370m south of Gails Drive and Vaughans Road.
2. Section 2: Okura River Road between Vaughans Road and East Coast Road.

The speed limit on Okura River Road, Okura has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Okura River Road connects to Warman Road to the west, and Vaughans Road to the east. This road provides access to residential properties.	Okura River Road connects to East Coast Road to the south. This road provides access to residential properties
	Okura River Road is approximately 1.35 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	Okura River Road is approximately 1.05 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	Okura River Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Okura River Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: zero fatal, one serious, one minor and two non-injury crashes. This resulted in one Death and Serious Injury (DSI).	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: zero fatal, one serious, one minor and two non-injury crashes. This resulted in one Death and Serious Injury (DSI).

Requirement	Comments	
	This data includes crashes for all road users and therefore crash risk for all road users were considered.	This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Okura River Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Curved.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Curved.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,198 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1,198 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Okura River Road has a mean operating speed of 50.4 km/h.	This section of Okura River Road has a mean operating speed of 49.5 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Vaughans Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>East Cast Road:</b> 80 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	2
DSI crashes during the period	1	1
Corridor Length (km)	1.35	1.05
Annual Daily Traffic	1198	1198

Section 1:

- o The Collective Risk score is **0.15**. For Rural areas this corresponds to a Collective Risk band of **Medium-High**.
- o The Personal Risk score is **33.88**. For Rural areas this corresponds to a Personal Risk band of **High**.

Section 2:

- o The Collective Risk score is **0.19**. For Rural areas this corresponds to a Collective Risk band of **High**.
- o The Personal Risk score is **43.35**. For Rural areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	1 to <2	1.2
Access density (per km)	>20	1.3	>20	1.3
Traffic volume	1000 to <6000	1.4	1000 to <6000	1.4

Section 1:

- The Infrastructure Risk Rating Score is **1.93**. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- The Infrastructure Risk Rating Score is **1.93**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

Section 2: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation*

- 60 km/h for Okura River Road between 370m south of Gails Drive and Vaughans Road. (Section 1)
- 60 km/h for Okura River Road between Vaughans Road and East Coast Road. (Section 2)

Okura River Road is a self-explaining road as the mean operating speeds is below or near, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit.

Engineering down/up of Okura River Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Okura River Road Section 1 & 2 due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and high road-side hazards. All of these factors contribute to the road's 'High' IRR score. The collective and personal risk of this road are classified as 'Medium-High' and 'High' for section 1, 'High' and 'High' for section 2 respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows eight crashes in the last 5 years including zero fatal, two serious, two minor, and four non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Okura River Road in Okura, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for Okura River Road section 1 and 2 which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Old Pine Valley Road (Dairy Flat)

The speed limit on Old Pine Valley Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> <li>Refer to the Process Summary for further information.</li> </ul>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Old Pine Valley Road connects to Pine Valley Road to the south. This road is approximately 0.34 km in length.	Old Pine Valley Road connects to Pine Valley Road to the south. This road is approximately 0.51 km in length.
	Old Pine Valley Road is classified as an Access road under the one network road classification (ONRC). Old Pine Valley Road is a two-way, Two lane undivided road. There are no pedestrian amenities or cyclist amenities.	Old Pine Valley Road is classified as an Access road under the one network road classification (ONRC). Old Pine Valley Road is a unseal road. There are no pedestrian amenities or cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one serious injury crash between 2016 and 2020. This Resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	From MegaMaps tool. <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curve</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and very narrow shoulder (0 to &lt;0.5m)</li> </ul>	From MegaMaps tool. <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curve</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow</li> </ul>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments	
	Section 1	Section 2
	<ul style="list-style-type: none"> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>	shoulder (0.5m to <1.0m) <ul style="list-style-type: none"> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural residential using MegaMaps tool. The IRR defines rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.".	The adjacent land use is classified as rural residential using MegaMaps tool. The IRR defines rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	From MegaMaps tool: <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) from MegaMaps is 57 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) from MegaMaps is 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road
(i) any planned modification to the road; and	Planned new development in the area	Planned new development in the area
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 100km/h.	The existing speed limit is 100km/h.

MegaMaps Mean Operating Speed (km/h)	This section of Old Pine Valley Road has a mean operating speed in the range of 30 to 40 km/h.	This section of Old Pine Valley Road has a mean operating speed in less than 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Pine Valley Road: 80 km/h (proposed 60 km/h)</li> </ul>	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Pine Valley Road: 80 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Old Pine Valley Road has the following information:

Section 1:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **High**.

Section 2:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.98. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

For section 1 and 2, the safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 60km/h.

### **Step 4: Conclusion**

Existing speed limit: 100km/h

*Proposed safe and appropriate speed limit recommendation = 60km/h.*

Old Pine Valley Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Old Pine Valley Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed limit of 100 km/h on Old Pine Valley Road, is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed. In addition, the proposed 60 km/h speed limit support the new residential development in the area.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ormiston Road (Flat Bush)

Ormiston Road, Flat Bush, is divided into six sections as follows: <sup>1</sup>

1. Section 1: Ormiston Road between Springs Road and Te Irirangi Drive
2. Section 2: Ormiston Road between Te Irirangi Drive and 160 m west of Rienzo Drive.
3. Section 3: Ormiston Road between 160 m west of Rienzo Drive and Wallen Road
4. Section 4: Ormiston Road between Wallen Drive and 460 m northeast of Wallen Drive.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Ormiston Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Ormiston Road connects to Preston Road to the west, Murchison Road, Jarvis Way, Florence Carter Avenue, Te Irirangi Drive, Michael Jones Drive, Chapel Road, Whenua Road, Mary Ann Road, Bonnette Road, Haddington Drive, Pencaitland Drive, Collier Drive, Te Ara Kahikatea Road, Helianthus Avenue, Murphys Road, Henry Maxwell Drive, Valderama Drive, Tipu Road to the south, Laidlaw Way, Bishop Lenihan Place, Te Irirangi Drive, Chapel Road, Bellingham Road, Pencaitland Drive, Flintridge Drive, Murphys Road, Rienzo Drive, Valderama Drive, Azzurro Way to the north, and Tamure Road, Ormiston Road and Wallen Road to the east. This road provides access to commercial and residential properties.		
	This section is approximately 1.21 km in length. It is classified as a Regional road under the one network road	This section is approximately 2.21 km in length. It is classified as an Arterial road under the one network road	This section is approximately 0.78 km in length. It is classified as an Arterial road under the

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	classification (ONRC).	classification (ONRC).	one network road classification (ONRC).
	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, multi-lane, divided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>seventy-seven</b> crashes between 2016 and 2020: zero fatal, three serious, eight minor and sixty-six non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>sixty-one</b> crashes between 2016 and 2020: zero fatal, two serious, eleven minor and forty-eight non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>fourteen</b> crashes between 2016 and 2020: zero fatal, zero serious, seven minor and seven non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Ormiston Road is identified as one of the top 10% DSI saving network sections for New Zealand.		Ormiston Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ormiston Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b></li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<p>Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</p> <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<p>Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</p> <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<p>Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</p> <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	<p>The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."</p>	<p>The adjacent land use is classified as Controlled Access using on-site information and geomaps. The IRR defines Controlled Access as "Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."</p>	<p>The adjacent land use is classified as Controlled Access using on-site information and geomaps. The IRR defines Controlled Access as "Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."</p>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p>		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	<p>Average daily traffic (ADT) was determined from MegaMaps as 14,916 vehicles per day (vpd). This level of</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 8,895 vehicles per day (vpd). This level of</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 10,010 vehicles per day (vpd). This level of traffic volume is</p>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<p>traffic volume is consistent with the nature of the road and traffic survey.</p>	<p>traffic volume is consistent with the nature of the road and traffic survey.</p>	<p>consistent with the nature of the road and traffic survey.</p>
(i) any planned modification to the road; and	<p>There are no planned modifications currently.</p>		
(j) the views of interested persons and groups.	<p>Potential changes to the speed limit in this area were presented to the Local Board via email/meeting on date of sent memo/meeting. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>		

Requirement	Comments
	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	<p>The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.</p>
(c) the function and use of the road; and	<p>Ormiston Road connects to Ormiston Road, Wallen Road and Tamure Road to the west, Shepherds Lane, Kitenga Road to the south and Caldwell's Road and Sandstone Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 0.46 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records <b>six</b> crashes between 2016 and 2020: zero fatal, one serious, two minor and three non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data</p>

Requirement	Comments
	<b>Section 4</b>
	includes crashes for all road users and therefore crash risk for all road users were considered.
	Ormiston Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ormiston Road were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Wide Lane (&gt;3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Controlled Access using on-site information and geomaps. The IRR defines Controlled Access as " <i>Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g., as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,852 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Engineering treatment planned on Ormiston Road to reduce the operating speed.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
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Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section of has a mean operating speed of 47.69 km/h.	This section of has a mean operating speed of 45.69 km/h.	This section of has a mean operating speed of 61 km/h.
<b>AT also had regard to</b>	<b>Section 4</b>		
Current speed limit	The existing speed limit is 60 km/h.		
MegaMaps Mean Operating Speed	This section of has a mean operating speed of 65.99 km/h.		
Speed limits on adjoining roads	The existing speed limits on adjoining roads (for Section 1 to Section 7) are: <ul style="list-style-type: none"> <li>• Preston Road: 50 km/h</li> <li>• Murchison Road: 50 km/h</li> <li>• Jarvis Way: 50 km/h</li> <li>• Florence Carter Avenue: 50 km/h</li> <li>• Te Irirangi Drive: 60 km/h (proposed 50 km/h)</li> <li>• Michael Jones Drive: 50 km/h</li> <li>• Chapel Road: 60 km/h (proposed 50 km/h)</li> <li>• Whenua Road: 50 km/h</li> <li>• Mary Ann Road: 50 km/h</li> <li>• Bonnette Road: 50 km/h</li> <li>• Haddington Drive: 50 km/h</li> <li>• Pencaitland Drive: 50 km/h</li> <li>• Collier Drive: 50 km/h</li> <li>• Te Ara Kahikatea Road: Variable Speed Zone – 40 km/h &amp; 50 km/h</li> <li>• Helianthus Avenue: Variable Speed Zone – 40 km/h &amp; 50 km/h</li> <li>• Murphys Road: 60 km/h (proposed 50 km/h)</li> <li>• Henry Maxwell Drive: 50 km/h</li> <li>• Valderama Drive: 50 km/h</li> <li>• Tipu Road: 50 km/h</li> <li>• Laidlaw Way: 50 km/h</li> <li>• Bishop Lenihan Place: 50 km/h</li> <li>• Bellingham Road: 50 km/h</li> <li>• Flintridge Drive: Variable Speed Zone – 40 km/h &amp; 50 km/h</li> <li>• Rienzo Drive: 50 km/h</li> <li>• Azzurro Way: 50 km/h</li> <li>• Tamure Road: 50 km/h</li> <li>• Wallen Road: 50 km/h</li> <li>• Shepherds Lane: 50 km/h</li> <li>• Kitenga Road: 50 km/h</li> <li>• Caldwell's Road: 100 km/h</li> <li>• Sandstone Road: 80 km/h</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	11	13	7
DSI crashes during the period	3	2	0
Corridor Length (km)	1.21	2.21	0.78
Annual Daily Traffic	14,916	8,895	10,010
Required Information for safety metrics calculations	Data		
	Section 4		
Crash Analysis Period (years)	5		
Total injury crashes during period	3		
DSI crashes during the period	1		
Corridor Length (km)	0.46		
Annual Daily Traffic	9,852		

- Section 1:
  - The Collective Risk score is 0.50. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 9.12. For urban areas this corresponds to a Personal Risk band of **Medium-High**
- Section 2:
  - The Collective Risk score is 0.18. For urban areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 5.58. For urban areas this corresponds to a Personal Risk band of **Medium**
- Section 3:
  - The Collective Risk score is 0.0. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.0. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 4:
  - The Collective Risk score is 0.43. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 12.09. For urban areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1	Section 2	Section 3
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	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40	Divided-traversable	3.00	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Commercial big box	4.00	Controlled access	2.00	Controlled access	2.00
Intersection density (per km)	5 to <10	2.60	3 to <5	1.50	3 to <5	1.50
Access density (per km)	10 to <20	1.10	5 to <10	1.06	2 to <5	1.03
Traffic volume (vpd)	>12000	3.00	6000 to <12000	2.20	>12000	3.00
Feature	Section 4					
	Category		Risk Score			
Road stereotype	Two-lane undivided		3.70			
Road alignment	Curved		1.80			
Carriageway width	Wide lane, Narrow shoulder		1.18			
Roadside hazards (in both directions)	High		2.28			
Adjacent land use	Controlled access		2.00			
Intersection density (per km)	1 to <2		1.20			
Access density (per km)	2 to <5		1.03			
Traffic volume (vpd)	6000 to <12000		2.20			

- Section 1
  - The Infrastructure Risk Rating Score is 2.68. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.93. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.11. For urban areas this corresponds to an IRR band of **Medium**
- Section 4
  - The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1, 2, 3 and 4: The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Ormiston Road between Springs Road and Te Irirangi Drive (section 1)
- 50 km/h on Ormiston Road between Te Irirangi Drive and 160 m west of Rienzo Drive (section 2)
- 50 km/h on Ormiston Road between 160 m west of Rienzo Drive and Wallen Road (section 3)
- 50 km/h on Ormiston Road between Wallen Drive and 460 m north east of Wallen Drive. section 4)

Ormiston Road section 1 is a self-explaining road as the mean operating speeds (50 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Ormiston Road section 2, 3, and 4 are road requiring engineering down interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed.

Engineering up of Ormiston Road were considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h were selected for Ormiston Road sections 1, 2, 3 and 4, due to a multitude of factors. These being the very narrow shoulder width, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as '**High**' and '**High**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows hundred and seventy crashes in the last 5 years including zero fatal, eight serious, thirty-two minor, and hundred and thirty non-injury crashes.

After considering all of the above factors, the existing speed limit of 60km/h on Ormiston Road in Flat Bush is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Ormiston Road section 1, 2, 3 and 4 is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Orrs Road (Wiri)

The speed limit on Orrs Road, Wiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Orrs Road connects to Puhinui Road to the south. This road provides access to residential properties.
	This section is approximately 0.26 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Orrs Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Puhinui Road:</b> 100 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.26
Annual Daily Traffic	140

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	5 to <10	1.06
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **1.99**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h Orrs Road (Full Length).*

Orrs Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Orrs Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Orrs Road due to multitude of factors. These being the narrow lane width, very narrow shoulder width, high roadside hazards and low mean operating speeds. All of these factors contribute to the road's '**Medium-High**' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Orrs Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Painton Road (Silverdale)

The speed limit on Painton Road, Silverdale (between 50 m south of Hibiscus Coast Highway and Small Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Painton Road connects to Hibiscus Coast Highway to the north and Small Road to the south. This road provides access to residential properties and is approximately 0.17 km in length.</p> <p>Painton Road is classified as an access road under the one network road classification (ONRC). Painton Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Painton Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines urban residential as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	The following characteristics for Painton Road were estimated using MegaMaps tool. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Painton Road has a mean operating speed of 26.76 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>• Small Road: 50 km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

The following characteristics for Painton Road were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low- Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

Painton Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. this section of Painton Road is at the back of main bus hub with high number of pedestrian movements.

The proposed safe and appropriate speed limit for Painton Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Pakiri River Road (Pakiri)

The speed limit on Pakiri River Road, Pakiri (between 1700m North of Witten Road to the road end) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
	Section 1
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Pakiri River Road connects to Witten Road to the east. This road provides access to residential properties.
	<p>This section is approximately 0.69 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020. Zero fatal, zero serious, zero minor and one non-injury. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Pakiri River Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with

Requirement	Comments
	Section 1
	<i>accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km.</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 221 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34.95 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Pakiri Road:</b> 60 km/h.</li> <li><b>Witten Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1
Crash Analysis Period (years)	5
Total injury crashes during period	0

DSI crashes during the period	0
Corridor Length (km)	0.69
Annual Daily Traffic	221

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

Feature	Section 2	
	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is 2.1. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h between 1700m North of Witten Road (Pakiri Beach holiday park) to the road end.*

*Pakiri River Road* is a self-explaining road as the mean operating speeds (34.95 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of *Pakiri River Road* was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Pakiri Road due multitude of factors. These being to unsealed surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor and one non- injury.

After considering all the above factors, the existing speed limit of 60 km/h on *Pakiri River Road* in *Pakiri*, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Pakuranga Road (Pakuranga)

Road Name, Pakuranga, is divided into three sections as follows: <sup>1</sup>

1. Section 1: Pakuranga Road between 180m east of Kerswill Place and Ti Rakau Drive
2. Section 2: Pakuranga Road between Ti Rakau Drive and Grammar School Road
3. Section 3: Pakuranga Road between Grammar School Road and 144m west of Stanniland Street
4. Section 4: Pakuranga Road between 144m west of Stanniland Street and Ridge Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Pakuranga Road, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	<p>Pakuranga Road connects to Pakuranga Road and Kerswill Place to the west, Millen Avenue, Latham Avenue, Ti Rakau Drive, Brampton Court, Williams Roberts Road, Lewis Road Greenhill Crescent, Johns Lane, Gossamer Drive to the south, Williams Avenue, Tamaki Bay Drive, Kentigern Close, Grammar School Road, Glenmore Road and Wilbur Place to the north and Pakuranga Road to the east. This road provides access to commercial and residential properties.</p>		
	This section is approximately 0.60 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 1.24 km in length. It is classified as a Regional road under the one network road classification (ONRC).	This section is approximately 0.87 km in length. It is classified as a Regional road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, five-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, six-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, four-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>thirty</b> crashes between 2016 and 2020: zero fatal, zero serious, six minor and twenty-four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>seventy-six</b> crashes between 2016 and 2020: zero fatal, one serious, twenty-three minor and fifty-two non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>forty-six</b> crashes between 2016 and 2020: one fatal, one serious, five minor and thirty-nine non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Pakuranga Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31,848 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 10,920 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 42,000 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.		

Requirement	Comments	
	Section 4	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Pakuranga Road connects to Pakuranga Road to the west, Stanniland Street, Fortunes Road, Pigeon Mountain Road, Bucklands Beach Road, Hutchinsons Road, Angelo Avenue, The Link to the north, Cascades Road, Bells Road, Aviemore Drive, Aberfeldy Avenue, Cromdale Avenue, to the south and Ridge Road and Botany Road to the east. This road provides access to commercial and residential properties.	
	This section is approximately 2.75 km in length. It is classified as a Regional road under the one network road classification (ONRC).	
	This section is a two-way, four-lane, divided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>hundred and eighty-seven</b> crashes between 2016 and 2020: zero fatal, eight serious, forty minor and hundred and thirty-nine non-injury crashes. This resulted in eight Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	
	Pakuranga Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Pakuranga Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Multi-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	

Requirement	Comments
	Section 4
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 42000 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section of has a mean operating speed in the range of 46.54 km/h.	This section of has a mean operating speed in the range of 53.5 km/h.	This section of has a mean operating speed in the range of 53.6 km/h.
AT also had regard to	Section 4		
Current speed limit	The existing speed limit is 60 km/h.		
MegaMaps Mean Operating Speed	This section of has a mean operating speed in the range of 46.3 km/h.		
Speed limits on adjoining roads	The existing speed limits on adjoining roads (for Section 1 to Section 4) are: <ul style="list-style-type: none"> <li>• Kerswill Place: 50 km/h</li> <li>• Millen Avenue: 50 km/h</li> <li>• Latham Avenue: 50 km/h</li> <li>• Ti Rakau Drive: 60 km/h (proposed 50 km/h)</li> <li>• Brompton Court: 50 km/h</li> <li>• Williams Roberts Road: 50 km/h</li> <li>• Lewis Road: 50 km/h</li> <li>• Greenhill Crescent: 50 km/h</li> <li>• Johns Lane: 50 km/h</li> </ul>		

<ul style="list-style-type: none"> <li>• Gossamer Drive: 50 km/h</li> <li>• Williams Avenue: 50 km/h</li> <li>• Tamaki Bay Drive: 50 km/h</li> <li>• Kentigern Close: 50 km/h</li> <li>• Grammar School Road: 50 km/h</li> <li>• Glenmore Road: 50 km/h</li> <li>• Wilbur Place: 50 km/h</li> <li>• Stanniland Street: 50 km/h</li> <li>• Fortunes Road: 50 km/h</li> <li>• Pigeon Mountain Road: 50 km/h</li> <li>• Bucklands Beach Road: 50 km/h</li> <li>• Hutchinsons Road: 50 km/h</li> <li>• Angelo Avenue: 50 km/h</li> <li>• The Link: 50 km/h</li> <li>• Cascades Road: 50 km/h</li> <li>• Bells Road: 50 km/h</li> <li>• Aviemore Drive: 60 km/h</li> <li>• Aberfeldy Avenue: 50 km/h</li> <li>• Cromdale Avenue: 50 km/h</li> <li>• Ridge Road: 50 km/h</li> <li>• Botany Road: 50 km/h</li> </ul>
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#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	6	24	7
DSI crashes during the period	0	1	2
Corridor Length (km)	0.60	1.24	0.87
Annual Daily Traffic	31,848	10,920	42,000
Required Information for safety metrics calculations	Data		
	Section 4		
Crash Analysis Period (years)	5		
Total injury crashes during period	48		
DSI crashes during the period	8		
Corridor Length (km)	2.75		
Annual Daily Traffic	42,000		

- Section 1:
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**

- o The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2:
  - o The Collective Risk score is 0.16. For urban areas this corresponds to a Collective Risk band of **Medium-High**
  - o The Personal Risk score is 4.03. For urban areas this corresponds to a Personal Risk band of **Low-Medium**
- Section 3:
  - o The Collective Risk score is 0.46. For urban areas this corresponds to a Collective Risk band of **High**
  - o The Personal Risk score is 3.01. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 4:
  - o The Collective Risk score is 0.58. For urban areas this corresponds to a Collective Risk band of **High**
  - o The Personal Risk score is 3.79. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.00	Multi-lane undivided	3.40	Divided-traversable	3.00
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3.00	Urban residential	3.00	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60	5 to <10	2.60	3 to <5	1.50
Access density (per km)	>20	1.30	>20	1.30	>20	1.30
Traffic volume (vpd)	>12000	3.00	6000 to <12000	2.20	>12000	3.00
Feature	Section 4					
	Category			Risk Score		
Road stereotype	Multi-lane undivided			3.40		

Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume (vpd)	>12000	3.00

- Section 1
  - o The Infrastructure Risk Rating Score is 2.37. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - o The Infrastructure Risk Rating Score is 2.29. For urban areas this corresponds to an IRR band of **Medium**.
- Section 3
  - o The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**
- Section 4
  - o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Pakuranga Road between 180m east of Kerswill Place and Ti Rakau Drive (section 1)
- 50 km/h on Pakuranga Road between Ti Rakau Drive and Grammar School Road (section 2)
- 50 km/h on Pakuranga Road between Grammar School Road and 144m west of Stanniland Street (section 3)
- 50 km/h on Pakuranga Road between 144m west of Stanniland Street and Ridge Road (section 4)

Pakuranga Road is self-explaining roads as the mean operating speeds (46.54, 53.5, 53.5 and 46.29 km/h respectively) are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Engineering up of Pakuranga Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Pakuranga Road due to a multitude of factors. These being the very narrow shoulder width and low mean operating speed. The collective and personal risk of this road are classified as 'High' and 'Low-Medium' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows three hundred and thirty-nine crashes in the last 5 years including one fatal, ten serious, seventy-four minor, and two hundred and fifty-four non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Pakuranga Road in Pakuranga, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Park Estate Road (Rosehill)

The speed limit on Park Estate Road, Rosehill (between motorway bridge and western end of Park Estate Road.) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Park Estate Road connects to Park Green Avenue, Parkmore Drive to the south and Papakowhatu Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 1,07 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian and cyclist amenities. There is on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: zero fatal, zero serious, one minor and one non-injury crash and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Park Estate Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as a "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,303 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Park Estate Road has a mean operating speed of 41.46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Park Estate Road (east section)- 40 km/h</b></li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.07
Annual Daily Traffic	1,303

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	1000 to <6000	1.4

The Infrastructure Risk Rating Score is **1.75**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for Park Estate Road between motorway bridge and western end of Park Estate Road.*

Hingaia Road is a self-explaining road as the mean operating speeds (41.46 km/h) are near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Hingaia Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Hingaia Road due to a multitude of factors. These being the narrow lane and shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows two crashes in the last 5 years including zero fatal, zero serious, one minor, and one non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Hingaia Road in Rosehill, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Pine Valley Road (Silverdale)**

The speed limit on Pine Valley Road, Silverdale (between 50m southwest of Old Pine Valley and Dairy Flat Highway) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pine Valley Road connects to Old Pine Valley Road to the north and Dairy Flat Highway to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.65 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: zero fatal, one serious, one minor and one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Pine Valley Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Pine Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as "Rural area

Requirement	Comments
	<i>with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> &lt;1 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,552 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	New residential development along Pine Valley Road
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 69.5 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Old Pine Valley Road:</b> 100 km/h.</li> <li>• <b>Dairy Flat Highway:</b> 80 km/h. (Proposed 60 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	1
Corridor Length (km)	0.60
Annual Daily Traffic	6,552

- The Collective Risk score is **0.33**. For Rural areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **13.93**. For Rural areas this corresponds to a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Wide shoulder	1.0
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	<1	1.0
Traffic volume	6000 to <12000	2.2

- The Infrastructure Risk Rating Score is **1.59**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h Pine Valley Road (between 50m southwest of Old Pine Valley Road and Dairy Flat Highway).*

A proposed speed limit of 60 km/h was selected for this Pine Valley Road due to multitude of factors. These being the medium lane width, wide shoulder width, straight nature of the road, high roadside hazards and rural residential land use. Both the collective and personal risk of this road are classified as '**High**' due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>. This road is identified as one of the top 10% DSI saving network sections for New Zealand.

Crash history from WK NZTA's CAS database shows three crashes in the last 5 years including zero fatal, one serious, one minor, and one non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Pine Valley Road in Silverdale, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

The proposed speed is a challenging conversation as the existing mean operating speed of Pine Valley Road is 69.5 km/h and higher than the recommended speed limit of 60 km/h. However this section

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

of Pine Valley Road is becoming urbanised and the new development will change the existing road environment. The residential developments are likely to reduce the operating speed, hence physical interventions are not required at this stage.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Pohewa Road (Silverdale)

The speed limit on Pohewa Road, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pohewa Road connects to Goldwater Drive to the north and Silverwater Drive to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Pohewa Road is classified as an Access road under the one network road classification (ONRC). Pohewa Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Pohewa Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	The following characteristics for Pohewa Road were estimated using MegaMaps tool. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.  Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Pohewa Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>• Silverwater Drive: 50 km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

The following characteristics for Pohewa Road were estimated using MegaMaps tool. :

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

Pohewa Road is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Pohewa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Pohewa Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Polygon Road (Mission Bay)

The speed limit on Polygon Road, Mission Bay between 15m east of Turua Street and 120m east of Turua Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>This section of Polygon Road connect with Turua Street and provides access to the town centre and is approximately 0.11 km in length.</p> <p>This section of Polygon Road is classified as a Secondary Collector road under the one network road classification (ONRC). Polygon Road is a two-lane, undivided road. There are pedestrian amenities and cycle lanes along this section of road with no on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one minor. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Polygon Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area originated from the public feedback report on St Heliers town centre safety improvements project. This reflects the public's views on the engineering measures implemented in the town centre.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Polygon Road has a mean operating speed in the range of 25-30 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads:</p> <ul style="list-style-type: none"> <li><b>Turua Street:</b> 30 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, Polygon Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.6. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed Polygon Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Prices Road (Wiri)

The speed limit on Prices Road, Wiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Prices Road connects to Puhinui Road to the north. This road provides access to residential properties.
	This section is approximately 1.06 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities, cyclist amenities and on-street parking along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>one</b> crash between 2016 and 2020: zero fatal, zero serious, one minor and zero non-injury. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Prices Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 380 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 44.21 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Puhinui Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.06
Annual Daily Traffic	380

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.20
Access density (per km)	10 to <20	1.10
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is 1.40. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Prices Road.*

Prices Road is a self-explaining road as the mean operating speeds (44.21 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Prices Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this road due to multitude of factors. These being the very narrow shoulder width, high road side hazards and low mean operating speeds.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, one minor, and zero non-injury crashes.

After considering all the above factors, the existing speed limit of 100 km/h on Prices Road in Wiri, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Puni Road (Pukekohe)

Puni Road, Pukekohe, is divided into one section as follows:<sup>1</sup>

- Section 1: Puni Road between Beresford Street and Rowles Road.

The speed limit on Puni Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Puni Road connects to Beresford Street, Ward Street to the west and Rowles Street to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.82 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records eleven crashes between 2016 and 2020: zero fatal, zero serious, four minor and seven non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Puni Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Puni Road were determined using a combination of site drive-over footage, on-site information and geomaps information.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,525 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Proposed new pedestrian facility at this section of Puni Road.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Puni Road has a mean operating speed of 62.3 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Rowles Road:</b> 50 km/h</li> <li>• <b>Ward Street:</b> 50 km/h</li> <li>• <b>Beresford Street:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5

Total injury crashes during period	4
DSI crashes during the period	0
Corridor Length (km)	0.82
Annual Daily Traffic	9,525

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Wide shoulder	1.0
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	6000 to <12000	2.2

- The Infrastructure Risk Rating Score is **1.92**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h between Beresford Street and Rowles Road of Puni Road.*

Puni Road is a road requiring engineering down interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed. Engineering up of Puni Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Puni Road due to a multitude of factors. These being the medium lane and wide shoulder width, straight nature of the road, and moderate road-side hazards.

Crash history from WK NZTA's CAS database shows eleven crashes in the last 5 years including zero fatal, zero serious, four minor, and seven non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Puni Road in Pukekohe, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Given that the existing mean operating speed of Puni Road is 62.3 km/h and higher than the recommended speed limit of 50 km/h, physical interventions are required to engineer down the operating speed. Auckland Transport has planned to install new pedestrian facility on Puni Road to reduce the travel speeds.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Rata Road (Whenuapai)

The speed limit on Rata Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rata Road connects to Kauri Road and Old Kauri Road. This road provides access to residential properties.</p> <p>Rata Road is approximately 0.45 km in length. It is classified as an Access Road under the one network road classification (ONRC).</p> <p>Rata Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Rata Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rata Road has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Kauri Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.45
Annual Daily Traffic	147

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	2 to <3	1.3
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.66**. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 40 km/h Rata Road Between Kingsway Road and Kauri Road.*

Rata Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Rata Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Rata Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (<50 km/h).

After considering all the above factors, the existing speed limit of 70 km/h on Rata Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Renton Road (Mangere)**

Renton Road, Mangere, is divided into two sections as outlined below:

- Section 1: Renton Road between Ihumatao Road and 341m south of Ihumatao Road.
- Section 2: Renton Road between 341m south of Ihumatao Road and end of the road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit for all sections of Renton Road, Mangere have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Renton Road connects to Ihumatao Road to the north and Renton Road to the south. This road provides access to residential properties.	Renton Road connects to Renton Road to the north. This road provides access to residential properties.
	This section is approximately 0.34 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).	This section is approximately 0.57 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities, cyclist amenities and on-street parking along this road.	This section is a two-way, two-lane, unsealed road. There are no pedestrian amenities, cyclist amenities and on-street parking along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash on this section of the road between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash on this section of the road between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.

Requirement	Comments	
	Section 1	Section 2
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Renton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Low.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> &lt;1 access per km.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km.</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 48 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 48 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Renton Road has a mean operating speed of 38 km/h.	This section of Renton Road has a mean operating speed of 24.47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ihumatao Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Renton Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Renton Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.34	0.57
Annual Daily Traffic	48	48

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43	Low	0.40
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.3	<1	1.00
Access density (per km)	<1	1.00	1 to <2	1.01
Traffic volume	<1000	1.00	<1000	1.00

- Section 1:
  - The Infrastructure Risk Rating Score is **1.25**. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2:
  - The Infrastructure Risk Rating Score is **1.04**. For rural areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h. (Section 1).
- The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h. (Section 2).

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h Renton Road (between Ihumatao Road and 341m south of Ihumatao Road) (Section 1).
- 60 km/h Renton Road (between 341m south of Ihumatao Road and end of the road) (Section 2).

Section 1 and 2 of Renton Road is a self-explaining road as the mean operating speeds (38 km/h and 24.67 km/h respectively) are below or near, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Renton Road was considered but dismissed due to

the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Renton Road due to a multitude of factors. These being the unsealed surface, narrow lane width, very narrow shoulder width, moderate roadside hazards, rural residential land use and low mean operating speed (<40 km/h).

After considering all the above factors, the existing speed limit of 100 km/h on Renton Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Renton Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (38 and 24.67 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Riverlea Road (Whenuapai)

The speed limit on Riverlea Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Riverlea Road connects to Bristol Road and Rope Road to the north and Dale Road to the south. This road provides access to residential properties.</p> <p>Riverlea Road is approximately 1.78 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Riverlea Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: zero fatal, zero serious, zero minor and one non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Riverlea Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Minor</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 569 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Riverlea Road has a mean operating speed of 49.03 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bristol Road:</b> 80 km/h (proposed to be lowered to 60 km/h).</li> <li><b>Rope Road:</b> 80 km/h (proposed to be lowered to 60 km/h).</li> <li><b>Dale Road:</b> 80 km/h (proposed to be lowered to 50 and 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.78
Annual Daily Traffic	569

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Minor	0.67
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.25**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 60 km/h Full length Riverlea Road.*

Riverlea Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Riverlea Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Riverlea Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, minor road-side hazards and low mean operating speed (<50 km/h).

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, zero serious, zero minor and one non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Riverlea Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Rodeo Drive (Redvale)

The speed limit on Rodeo Drive, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Rodeo Drive connects to East Coast Road to the south. This road provides access to residential properties.
	Rodeo Drive is approximately 0.48 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	Rodeo Drive is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Rodeo Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rodeo Drive has a mean operating speed of 24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>East Coast Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.48
Annual Daily Traffic	41

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.58**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Rodeo Drive.*

Rodeo Drive is a self-explaining road as the mean operating speeds (24 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Rodeo Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Rodeo Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and moderate road-side hazards.

After considering all of the above factors, the existing speed limit of 80 km/h on Rodeo Drive in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Rodeo Drive is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Rope Road (Whenuapai)**

The speed limit on Rope Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rope Road connects to Bristol Road to the west and Riverlea Road to the east. This road provides access to residential properties.</p> <p>Rope Road is approximately 0.26 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>Rope Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Rope Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 351 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rope Road has a mean operating speed in the range of 32 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bristol Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Riverlea Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.26
Annual Daily Traffic	351

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	5 to <10	1.06
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **1.59**. For Rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 60 km/h Full length Rope Road.*

Rope Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Rope Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Rope Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (<50 km/h).

After considering all the above factors, the existing speed limit of 80 km/h on Rope Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Roscommon Road (Clendon Park)

Roscommon Road, Clendon Park is divided into two sections as follows:<sup>1</sup>

1. Section 1: Roscommon Road between Palmers Road and Browns Road
2. Section 2: Roscommon Road between Wiri Station Road and Cavendish Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Roscommon Road, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Roscommon Road connects to Cavendish Drive, Vogler Drive and Puaki Drive to the north, Wiri Station Road, Langley Road, Bolderwood Place, Browns Road, Burbank Avenue, Pushon Place, Wordsworth Road and Sharland Avenue to the east, Hautu Drive, Kiwi Tamaki Road, Finlayson Avenue, Moncrieff Avenue, Burundi Avenue and Robert Ross Place to the west and Palmers Road, Weymouth Road and Mahia Road to the south. This road provides access to commercial and residential properties.	
	This section is approximately 1.40 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.71 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, four-lane, divided road. There are pedestrian amenities along this	This section is a two-way, two-lane, divided road. There are pedestrian amenities and on-street

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	section. There are no cyclist amenities and on-street parking.	parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one-hundred and fifteen crashes between 2016 and 2020: zero fatal, three serious, thirty-two minor and eighty non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>twenty-four</b> crashes between 2016 and 2020: zero fatal, two serious, seven minor and fifteen non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Roscommon Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-non-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder &gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 15,558 vehicles per day (vpd). This level of traffic volume is	Average daily traffic (ADT) was determined from MegaMaps as 16,714 vehicles per day (vpd). This level of traffic volume is

Requirement	Comments	
	Section 1	Section 2
	consistent with the nature of the road and traffic survey.	consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via email/meeting on date of sent memo/meeting. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed in the range of 48.4 km/h.	This section has a mean operating speed in the range of 46.88 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Cavendish Drive: 60 km/h (proposed 50 km/h)</li> <li>• Vogler Drive: 50 km/h</li> <li>• Puaki Drive: 50 km/h</li> <li>• Wiri Station Road: 60 km/h (proposed 50 km/h)</li> <li>• Langley Road: 50 km/h</li> <li>• Bolderwood Place: 50 km/h</li> <li>• Browns Road: 50 km/h</li> <li>• Burbank Avenue: 50 km/h</li> <li>• Pushon Place: 50 km/h</li> <li>• Wordsworth Road: 50 km/h</li> <li>• Sharland Avenue: 50 km/h</li> <li>• Hautu Drive: 50 km/h</li> <li>• Kiwi Tamaki Road: 50 km/h</li> <li>• Finlayson Avenue: 50 km/h</li> <li>• Moncrieff Avenue: 50 km/h</li> <li>• Burundi Avenue: 50 km/h</li> <li>• Robert Ross Place: 50 km/h</li> <li>• Palmers Road: 50 km/h</li> <li>• Weymouth Road: 50 km/h</li> <li>• Mahia Road: 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics**

	Data

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	35	9
DSI crashes during the period	3	2
Corridor Length (km)	1.40	0.71
Annual Daily Traffic	15,558	16,714

- Section 1
  - The Collective Risk score is 0.43. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 7.56. For urban areas this corresponds to a Personal Risk band of **Medium-High**
- Section 2
  - The Collective Risk score is 0.56. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 9.21. For urban areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-non-traversable	1.00	Divided-traversable	3.00
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Wide shoulder	1.00	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80	Moderate	1.43
Adjacent land use	Urban residential	3.00	Commercial big box	4.00
Intersection density (per km)	5 to <10	2.60	1 to <2	1.20
Access density (per km)	>20	1.30	10 to <20	1.10
Traffic volume (vpd)	>12000	3.00	>12000	3.00

- Section 1

- o The Infrastructure Risk Rating Score is 2.02. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - o The Infrastructure Risk Rating Score is 2.07. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Roscommon Road between Palmers Road and Browns Road (section 1)
- 60 km/h on Roscommon Road between Wiri Station Road and Cavendish Drive. (section 2)

Roscommon Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit.

Engineering up of both sections of Roscommon Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for section 1 and 2 of Roscommon Road due to multitude of factors. These being the very narrow shoulder, non-traversable median, severe roadside hazards and low mean operating speed. The collective and personal risk of this road are classified as **'High'** and **'Medium-High'** for section 1 and **'High'** for section 2 respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows one-hundred and thirty nine crashes along this section in the last 5 years including zero fatal, five serious, thirty-nine minor and ninety-five non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on section 1 and 80km/h on section 2 of Roscommon Road in Clendon Park, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit of section 1 is 50 km/h which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for section 2 of Roscommon Road is 60 km/h which is higher than the Speed Management Guide recommendation (50 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## **Speed Limit Review – Russell Road (Wainui)**

The speed limit on Russell Road, Wainui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Russell Road connects to Upper Orewa Road to the east. This road provides access to residential properties.
	This section is approximately 0.58 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Russell Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed.</li> <li>• <b>Road alignment:</b> Curved.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 92 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes..

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 32.32km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Upper Orewa Road:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.58
Annual Daily Traffic	92

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **2.15**. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h Russell Road (Full length).*

Russell Road is a self-explaining road as the mean operating speeds (32.32km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Russell Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Russell Road due to multitude of factors. These being the unsealed surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road side hazards and low mean operating speeds. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Russell Road in Wainui, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Shelly Beach Parade (Cockle Bay)

The speed limit on Shelly Beach Parade, Cockle Bay (between 50m east of Pah Road and the eastern end of Shelly Beach Parade) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Shelly Beach Parade connects to Pah Road to the west. This road is approximately 0.36 km in length.</p> <p>Shelly Beach Parade is classified as an Access road under the one network road classification (ONRC). Shelly Beach Parade is a two-way, Two lane undivided road. There is pedestrian amenities and road side parking, but no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and wide shoulder (1.0 m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 582 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	No planned modification to the road currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 28/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Shelly Beach Parade has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pah Road: 50 km/h</li> <li>• Cookle Bay Road: 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Shelly Beach Parade has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.58. For urban areas this corresponds to an IRR band of **Low**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Megamap is 40 km/h

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 20km/h (for Parks)

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 20km/h.*

Shelly Beach Parade is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Shelly Beach Parade was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed limit of 50 km/h on Shelly Beach Parade, is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 20 km/h which is aligned with the recommended safe and appropriate speed. Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Silverwater Drive (Silverdale)

The speed limit on Silverwater Drive, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Silverwater Drive connects to Spine Road to the west and East Coast Road to the east. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Silverwater Drive is classified as an Access road under the one network road classification (ONRC). Silverwater Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Silverwater Drive were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following characteristics for Silverwater Drive were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.</p> <p>Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Silverwater Drive has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>East Coast Road: 80km/h (proposed 60km/h)</li> <li>Spine Road: 50 km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

The following characteristics for Silverwater Drive were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

Silverwater Drive is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Silverwater Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Silverwater Drive is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Simpson Road (Henderson Valley)**

The speed limit on Simpson Road, Henderson Valley (Simpson Road between 90m south of Tasman Avenue and Candia Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Simpson Road connects to Candia Road to the south. This road provides access to residential properties.
	This section is approximately 0.51 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: zero fatal, zero serious, one minor and four non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Yes, Simpson Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Simpson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as an "area with

Requirement	Comments
	<i>accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,443 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 17/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed	This section of Simpson Road has a mean operating speed of 51.9 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Candia Road:</b> 70 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.51
Annual Daily Traffic	2,443

The Collective Risk score is **0.0**, while the Personal Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.1
Traffic volume	1000 to <6000	2.2

The Infrastructure Risk Rating Score is **1.86**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h between 90m south of Tasman Avenue and Candia Road of Simpson Road.*

Simpson Road is a self-explaining road as the mean operating speeds (51.9 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Simpson Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Simpson Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows five crashes in the last 5 years including zero fatal, zero serious, one minor, and four non-injury crashes.

After considering all of the above factors, the existing speed limit of 70 km/h on Simpson Road in Henderson valley, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Smales Road (East Tamaki)**

Smales Road, East Tamaki is divided into two sections as follows: <sup>1</sup>

1. Section 1: Smales Road Between Springs/Harris Road and Kelvin Hart Drive
2. Section 2: Smales Road Between Kelvin Hart Drive and Chapel Drive.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Smales Road, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Smales Road connects to Kilkenny Drive and Chapel Road to the east, Allens Road, Harris Road and Springs Road to the west, Kelvin Hart Drive, Kellaway Drive, Te Irirangi Drive, Shrulie Place, Snave Place, and Armoy Drive and Wayne Francis Drive, Te Irirangi Drive and Sir William Avenue to the south. This road provides access to mixture of commercial and residential properties.	
	This section is approximately 0.99 km in length. It is classified as a regional road under the one network road classification (ONRC).	This section is approximately 0.76 km in length. It is classified as a regional road under the one network road classification (ONRC).
	This section is a two-way, multi-lane, undivided road. There are pedestrian amenities, on-street parking and cyclist amenities along this section.	This section is a two-way, multi-lane, undivided road. There are pedestrian amenities, on-street parking and cyclist amenities along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments			
	Section 1	Section 2		
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records <b>thirty-one</b> crashes between 2016 and 2020: zero fatal, one serious, nine minor and twenty-one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Smales Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>	<p>WK NZTA's Crash Analysis System (CAS) records <b>eighteen</b> crashes between 2016 and 2020: zero fatal, zero serious, five minor and thirteen non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>		
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Smales Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul> </td> </tr> </table>		<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Multi-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>			
(f) adjacent land use; and	<p>The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as "<i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i>"</p>	<p>The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "<i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i>"</p>		
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p>			

Requirement	Comments	
	Section 1	Section 2
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	<p>Average daily traffic (ADT) was determined from MegaMaps as 15,220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 14,906 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>
(i) any planned modification to the road; and	<p>There are no planned modifications currently.</p>	
(j) the views of interested persons and groups.	<p>Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed of 52.09 km/h.	This section of has a mean operating speed of 46.62 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Allens Road:</b> 50 km/h</li> <li>• <b>Harris Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Springs Road:</b> 50 km/h</li> <li>• <b>Sir William Avenue:</b> 50 km/h</li> <li>• <b>Snave Place:</b> 50 km/h</li> <li>• <b>Kelvin Hart Drive:</b> 50 km/h</li> <li>• <b>Shrule Place:</b> 50 km/h</li> <li>• <b>Kellaway Drive:</b> 50 km/h</li> <li>• <b>Te Irirangi Drive:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Wayne Francis Drive:</b> 50 km/h</li> <li>• <b>Armoy Drive:</b> 50 km/h</li> <li>• <b>Chapel Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Kilkenny Drive:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics**

	<b>Data</b>
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Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	<b>10</b>	<b>5</b>
DSI crashes during the period	1	0
Corridor Length (km)	0.99	0.76
Annual Daily Traffic	15,220	14,906

- Section 1
  - The Collective Risk score is 0.20. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 3.65. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Multi-lane undivided	3.40	Multi-lane undivided	3.40
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Commercial big box	4.00	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50	5 to <10	2.60
Access density (per km)	10 to <20	1.10	>20	1.30
Traffic volume (vpd)	>12000	3.00	>12000	3.00

- Section 1

- The Infrastructure Risk Rating Score is 2.24. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.42. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Smales Road Between Springs/Harris Road and Kelvin Hart Drive (section 1)
- 50 km/h on Smales Road Between Kelvin Hart Drive and Chapel Drive. (section 2)

Smales Road is a self-explaining road as the mean operating speeds (52.09 km/h and 46.63 km/h) are near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Engineering up of Smales Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Smales Road due to a multitude of factors. These being the very narrow shoulder width and low mean operating speed (<50 km/h). All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Low' respectively and due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows forty-nine crashes in the last 5 years including zero fatal, one serious, fourteen minor, and thirty-four non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Smales Road in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Small Road (Silverdale)

The speed limit on Small Road, Silverdale (between Painton Road and 160m west of Rainton Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Small Road connects to Goldwater Drive to the north and Silverwater Drive to the south. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Small Road is classified as a Secondary Collector road under the one network road classification (ONRC). Small Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Small Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines urban residential as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following characteristics for Small Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 1129 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.</p> <p>Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Small Road has a mean operating speed of 40.79 km/h
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>Painton Road: 50 km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

The following characteristics for Small Road were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low- Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

The proposed speed is a challenging conversation as the existing mean operating speed of Small Road is 40.79 km/h and higher than the recommended speed limit of 30 km/h. However, this section of Small Road is at the back of main bus hub with high number of pedestrian movement. There's a behaviour change required for the driver, the road environment is also likely to encourage a lower speed, hence physical interventions are not required at this stage.

The proposed safe and appropriate speed limit for Small Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Spedding Road (Whenuapai)**

Spedding Road, Whenuapai, is divided into two sections as outlined below:

1. Section 1: Spedding Road Between Trig Road and Mamari Road
2. Section 2: Spedding Road Between Mamari Road and end of the road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Spedding Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Spedding Road connects to Trig Road to the east. This road provides access to residential properties.	Spedding Road connects to Mamari Road to the north. This road provides access to residential properties.
	This section is approximately 0.58 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.45 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	Spedding Road is classified as a Spedding Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Spedding Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, one serious, zero minor and zero non injury. This	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

Requirement	Comments	
	resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Spedding Road were determined using MegaMaps tool/ a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use for this section is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use for this section is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 285 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 115 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were	

Requirement	Comments
	received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Spedding Road has a mean operating speed of 43.14km/h.	This section of Spedding Road has a mean operating speed of 22.14 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Trig Road:</b> 80 km/h</li> <li>• <b>Mamari Road:</b> 80 km/h</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	1	0
Corridor Length (km)	0.58	0.45
Annual Daily Traffic	285	115

- Section 1:
  - The Collective Risk score is **0.34**, while the Personal Risk score is **332.05**. For Rural areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **High**.
- Section 2:
  - The Collective Risk score is **0.0**, while the Personal Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score

Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5	2 to <3	1.3
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	<1000	1.0	<1000	1.0

Section 1:

- The Infrastructure Risk Rating Score is 1.57. For Rural areas this corresponds to an IRR band of **Medium**.

Section 2:

- The Infrastructure Risk Rating Score is 1.49. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

1. 60 km/h Spedding Road Between Trig Road and Mamari Road (Section 1)
2. 60 km/h Spedding Road Between Mamari Road and end of the road (Section 2)

Spedding Road is a self-explaining road as the mean operating speeds (43.14 & 22.14 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Spedding Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Spedding Road due to a multitude of factors. These being the narrow lane and shoulder width, straight nature of the road, high road-side hazards and low mean operating speed. All of these factors contribute to the road's 'Medium' IRR score. The collective and personal risk of this road are classified as '**High**' and '**High**' making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, one serious, zero minor and zero non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Spedding Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Spedding Road is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Spine Road (Silverdale)

The speed limit on Spine Road, Silverdale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Spine Road connects to Goldwater Drive to the north and Silverwater Drive to the south. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Spine Road is classified as an Access road under the one network road classification (ONRC). Spine Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Spine Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following characteristics for Spine Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 61 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban residential area.</p> <p>Potential changes to the speed limit in this area will be sent to the Local Board via email in November. Responses will be considered for investigation.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Spine Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Goldwater Drive: 50 km/h (proposed 30km/h)</li> <li>Silverwater Drive: 50 km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

The following characteristics for Spine Road were estimated using MegaMaps tool. :

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

Spine Road is a self-explaining road as the mean operating speeds is below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Spine Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The proposed safe and appropriate speed limit for Spine Road is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. The proposed 30 km/h speed will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Springs Road (Otaru)**

Springs Road, Otara, is divided into two sections as outlined below:

1. Section 1: Springs Road Between East Tamaki Road and Lady Ruby Drive
2. Section 2: Springs Road Between Lady Ruby Drive and Smales Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit for all sections of Springs Road, Otara have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	<p>Springs Road connects to Pearl Baker Drive and Valder Avenue to the west, East Tamaki Road and Johnstones Road to the south and Kerwyn Avenue, Springs Road (north) and Lady Ruby Drive to the north. This road provides access to residential properties and commercial centres.</p>	<p>Springs Road connects to Springs Road (south), Kerwyn Avenue and Lady Ruby Drive to the south and Allens Road, Harris Road and Smales Road to the north. This road provides access to commercial centres.</p>
	<p>This section is approximately 0.59 km in length. It is classified as a Regional road under the one network road classification (ONRC).</p>	<p>This section is approximately 0.62 km in length. It is classified as a Regional road under the one network road classification (ONRC).</p>
	<p>Springs Road is a two-way, multi-lane, divided-traversable road. There are pedestrian amenities along this road. There are no on-street parking and no cyclist amenities along this road.</p>	<p>Springs Road is a two-way, multi-lane, divided-traversable road. There are pedestrian amenities along this road. There are no on-street parking and no cyclist amenities along this road.</p>

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirty-seven crashes on this section of Springs Road between 2016 and 2020: zero fatal, two serious, nine minor and twenty-six non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records nineteen crashes on this section of Springs Road between 2016 and 2020: zero fatal, zero serious, three minor and sixteen non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Springs Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Springs Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial Big Box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial Big Box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	

Requirement	Comments	
	Section 1	Section 2
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 22,193 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 21,961 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed 50.5 km/h.	This section has a mean operating speed of 50.45 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Springs Road (north):</b> 50 km/h.</li> <li><b>Kerwyn Avenue:</b> 50 km/h.</li> <li><b>Lady Ruby Drive:</b> 50 km/h.</li> <li><b>East Tamaki Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Johnstone Road:</b> 50 km/h.</li> </ul>	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Springs Road (south):</b> 60 km/h (proposed 50 km/h).</li> <li><b>Kerwyn Avenue:</b> 50 km/h.</li> <li><b>Lady Ruby Drive:</b> 50 km/h.</li> <li><b>Harris Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Allens Road:</b> 50 km/h.</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2

Crash Analysis Period (years)	5	5
Total injury crashes during period	11	3
DSI crashes during the period	2	0
Corridor Length (km)	0.59	0.62
Annual Daily Traffic	22,193	21,961

- Section 1
  - The Collective Risk score is **0.68**, while the Personal Risk score is **8.40**. For Urban areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **Medium-High**.
- Section 2
  - The Collective Risk score is **0.0**, while the Personal Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.7	Divided-traversable	3.7
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Commercial big box	3.0	Commercial big box	3.0
Intersection density (per km)	5 to <10	2.60	3 to <5	1.50
Access density (per km)	>20	1.30	>20	1.30
Traffic volume	>12000	3.00	>12000	3.00

- Section 1: The Infrastructure Risk Rating Score is **2.49**. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is **2.25**. For urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h. (Section 1).
- The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h. (Section 2).

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h Springs Road: between East Tamaki Road and Lady Ruby Drive (Section 1).
- No changes proposed for Springs Road: between Lady Ruby Drive and Smales Road (Section 2).

Springs Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Springs Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the first section of Springs Road due to multitude of factors. These being very narrow shoulder width, moderate roadside hazards and commercial big box land use. All of these factors contribute to the road's **'Medium-High'** IRR score. The collective and personal risk of this road are classified as **'High'** and **'Medium-High'** respectively due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows thirty-seven crashes in the last 5 years including two serious, nine minor, and twenty-six non-injury crashes.

Both the sections of Springs Road are identified as one of the top 10% DSI saving network sections for New Zealand.

After considering all the above factors, the existing speed limit of 60 km/h on first section of Springs Road in Otara, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Spur Road (Stillwater)

Spur Road, Stillwater, is divided into two sections as outlined below:

1. Section 1: Spur Road Between East Coast Road and Duck Creek Road
2. Section 2: Spur Road Between Duck Creek Road and end of the Road

The speed limit on Spur Road, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Spur Road connects to East Coast Road to the west, Audrey Road to the south and Newman Road (east) to the north. This road provides access to residential properties.	Spur Road connects to Duck Creek Road to the south and Lennon Access Road to the north. This road provides access to residential properties and is approximately km in length.
	This section is approximately 1.41 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 1.44 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: zero fatal, zero serious, four minor and three non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: zero fatal, one serious, one minor and one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for

Requirement	Comments	
	users and therefore crash risk for all road users were considered.	all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Spur Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane 3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,544 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1,897 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	Spur Road has a mean operating speed of 46.8 km/h.	Spur Road has a mean operating speed of 62 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>East Coast Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Aubrey Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Newman Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Duck Creek Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Lennon Access Road:</b> 80 km/h (proposed to 60 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	4	2
DSI crashes during the period	0	1
Corridor Length (km)	1.41	1.44
Annual Daily Traffic	3,544	1,897

Section 1:

- o The Collective Risk score is **0.0**, while For Rural areas this corresponds to a Collective Risk band of **Low**.
- o the Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

Section 2:

- o The Collective Risk score is 0.13, while For Rural areas this corresponds to a Collective Risk band of **Medium-High**.
- o the Personal Risk score is 20.01. For Rural areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score

Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	1.79	Medium lane, Narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3	2 to <3	1.3
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	1000 to <6000	1.4	1000 to <6000	1.4

Section 1:

- o The Infrastructure Risk Rating Score is **1.89**. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- o The Infrastructure Risk Rating Score is **1.89**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 60 km/h for Spur Road between East Coast Road and Duck Creek Road (section 1)
- 60 km/h for Spur Road between Duck Creek Road and end of the road (section 2)

Spur Road section 1 and 2 are self-explaining as the mean operating speeds (46.8 and 62 km/h) are near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Spur Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Spur Road section 1 & 2 due to a multitude of factors. These being the medium/narrow lane and very narrow/narrow shoulder width, curved nature of the road, and high road-side hazards respectively. All of these factors contribute to the road's 'Medium-

High' IRR score. The collective and personal risk for second section of Spur Road is classified 'Medium-High' and 'High' due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows ten crashes in the last 5 years including zero fatal, one serious, five minor, and four non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Spur Road in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Spur Road section 1 & 2 is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Stancombe Road (Flat Bush)**

The speed limit on Stancombe Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stancombe Road connects to Chapel Road, Erica Road, Lorenzo Way, Kensway Drive, Baverstock Road and Carlos Drive to the north, Murphys Road, Cousins Road, Topland Drive and Chapel Road to the south, Jeffs Road to the east and Accent Drive to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.62 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities, cyclist amenities and on-street parking along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records twenty-nine crashes between 2016 and 2020: one fatal, one serious, six minor and twenty-one non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Road Name is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Stancombe Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 14,566 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Engineering treatment planned on Stancombe Road to reduce the operating speed.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of 46.8 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Accent Drive:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Chapel Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Kestev Drive:</b> 50 km/h</li> <li>• <b>Erica Road:</b> 50 km/h</li> <li>• <b>Lorenzo Way:</b> 50 km/h</li> <li>• <b>Kensway Drive:</b> 50 km/h</li> <li>• <b>Cousins Road:</b> 50 km/h</li> <li>• <b>Baverstock Road:</b> 50 km/h</li> <li>• <b>Carlos Drive:</b> 50 km/h</li> <li>• <b>Topland Drive:</b> 50 km/h</li> <li>• <b>Jeffs Road:</b> 50 km/h</li> <li>• <b>Murphys Road:</b> 60 km/h (proposed 50 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	8
DSI crashes during the period	2
Corridor Length (km)	1.62
Annual Daily Traffic	14,566

- The Collective Risk score is 0.25. For urban areas this corresponds to a Collective Risk band of **High**
- The Personal Risk score is 4.64. For urban areas this corresponds to a Personal Risk band of **Low-Medium**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	>20	1.30
Traffic volume (vpd)	>12000	3.00

The Infrastructure Risk Rating Score is 2.66. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 50 km/h for the full length of Stancombe Road.

Stancombe Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Stancombe Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Stancombe Road due to a multitude of factors. These being the very narrow shoulder width, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Low-Medium' respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows twenty-nine crashes in the last 5 years including one fatal, one serious, six minor, and twenty-one non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Stancombe Road in Flat Bush, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

### Speed Limit Review – Stuart Street (Ponsonby)

The speed limit on Stuart Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"><li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li><li>Infrastructure Risk Rating Manual 2016 (IRR)</li><li>WK NZTA MegaMaps tool</li><li>Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Stuart Street connects to Vermont Street to the south. This road provides access to residential properties.  This section is approximately 0.99 km in length. It is classified as an Access Road under the one network road classification (ONRC).  This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Stuart Street were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"><li><b>Road stereotype:</b> Two-lane undivided</li><li><b>Road alignment:</b> Straight</li><li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li><li><b>Roadside hazards (in both directions):</b> Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Vermont Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	<b>0</b>
DSI crashes during the period	0
Corridor Length (km)	0.99
Annual Daily Traffic	50

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	>10	5.0
Access density (per km)	>20	1.3
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is **2.26**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h for the full length of Stuart Street.*

Stuart Street is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Stuart Street was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for Stuart Street due to a multitude of factors. These being the narrow lane and very narrow shoulder width, tortuous nature of the road, moderate road-side hazards and low mean operating speed (<50 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Stuart Street in Waitemata, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Stuart Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Te Ara Kahikatea (Ormiston)

The speed limit on Te Ara Kahikatea, Ormiston (between 35m and 50m south of Ormiston Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Ara Kahikatea connects to Te Ara Kahikatea to the north and Te Ara Kahikatea to the south. This road provides access to commercial properties like colleges.</p> <p>This section is approximately 0.02 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero serious, zero minor and one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Te Ara Kahikatea were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in the range of 27.80 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Te Ara Kahikatea (north): Variable Speed Zone – 40 km/h and 60 km/h</li> <li>Te Ara Kahikatea (south): 30 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.02
Annual Daily Traffic	1,040

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	>10	5.00
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.27. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the section of Te Ara Kahikatea, Ormiston between 35m and 50m south of Ormiston Road.*

Te Ara Kahikatea is a self-explaining road as the mean operating speeds (28 km/h) are below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Te Ara Kahikatea was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Te Ara Kahikatea due to a multitude of factors. These being the very narrow shoulder width and low mean operating speed.

Crash history from WK NZTA's CAS database shows one crashes in the last 5 years including zero fatal, zero serious, zero minor, and one non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Te Ara Kahikatea in Ormiston, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Te Ara Kahikatea is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but are considered appropriate as it align with the speed limit of the surrounding environment.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Te Irirangi Drive (East Tamaki)

Te Irirangi Drive, East Tamaki, is divided into four sections as outlined below:

1. Section 1: Te Irirangi Drive between Ti Rakau Drive and 20m south of Te Koha Road.
2. Section 2: Te Irirangi Drive between 20m south of Te Koha Road and 100m north of Belinda Avenue
3. Section 3: Te Irirangi Drive between 100m north of Belinda Avenue and State Highway 1.
4. Section 4: Te Irirangi Drive between State Highway 1 and Great South Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Te Irirangi Drive, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Te Irirangi Drive connects to Ti Rakau Drive to the north and Te Koha Road to the east. This road provides access to residential properties and is approximately 0.34 km in length.	Te Irirangi Drive connects to Haven Drive, Leixlep Lane, Kelaway Drive, Gransna Lane, Bishop Dunn Place, Florence Carter Avenue to the west, Brinlack Drive, Aaronville Way, Chapeltown Drive, Sheddings Lane, Banville Road, Shengleton Lane, Moravale Lane, Treneary Lane to the east and Smales Road, Accent Drive, Ormiston Road to the south. This road provides access to residential properties and is approximately 4.63 km in length.
	Te Irirangi Drive is classified as a Regional road under the one network road classification (ONRC). Te Irirangi Drive is a two-way, two-lane, undivided road. There are pedestrian	Te Irirangi Drive is classified as a Regional road under the one network road classification (ONRC). Te Irirangi Drive is a two-way, two-lane, undivided road. There are pedestrian

Requirement	Comments	
	amenities along this section. There is no on-street parking or cyclist amenities.	amenities along this section. There is no on-street parking or cyclist amenities.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records twenty crashes between 2016 and 2020: zero fatal, one serious, four minor and fifteen non-injury crashes. This resulted in 1 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Te Irirangi Drive is identified as one of the top 10% DSI saving network sections for New Zealand.</p>	<p>WK NZTA's Crash Analysis System (CAS) records two hundred and two crashes between 2016 and 2020: one fatal, three serious, forty-four minor and one hundred fifty-four non-injury crashes. This resulted in four Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Te Irirangi Drive is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Te Irirangi Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Urban Residential as: "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.	The adjacent land use is classified as Controlled access using MegaMaps tool. The IRR defines Controlled Access as: Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements.
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	

Requirement	Comments	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 13,039 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 12,549 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 3	Section 4
	Te Irirangi Drive connects to Whetstone Drive, Penion Drive, to the west, Belinda Avenue to the east, Dawson Road, Boundary Road, Charntay Avenue, Leila Place, Shalimar Place, Diorella Drive to the south and Othello Drive, Sandrine Road to the north. This road provides access to residential properties and is approximately 2.28 km in length.	Te Irirangi Drive connects to Great South Road to the west. This road provides access to residential properties and is approximately 0.32 km in length.
	Te Irirangi Drive is classified as a Regional road under the one network road classification (ONRC). Te Irirangi Drive is a two-way, two-lane, undivided	Te Irirangi Drive is classified as a Regional road under the one network road classification (ONRC). Te Irirangi Drive is a two-way, two-lane, undivided

Requirement	Comments	
	road. There are pedestrian amenities along this section. There is no on-street parking or cyclist amenities.	road. There are pedestrian amenities along this section. There is no on-street parking or cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one hundred nineteen crashes between 2016 and 2020: one fatal, six serious, twenty-four minor and eighty-eight non-injury crashes. This resulted in seven Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  Te Irirangi Drive is identified as one of the top 10% DSI saving network sections for New Zealand.	WK NZTA's Crash Analysis System (CAS) records thirty-six crashes between 2016 and 2020: zero fatal, two serious, eleven minor and twenty-three non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  Te Irirangi Drive is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Te Irirangi Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (&gt;1.0 to 2.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial Big box as: <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	

Requirement	Comments	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 13,456 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 16,685 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	Section 1 The existing speed limit is 60 km/h.	Section 2 The existing speed limit is 60 km/h.
MegaMaps 85 <sup>th</sup> Percentile Mean Operating Speed (km/h)	This section of Te Irirangi Drive has a mean operating speed of 49.32 km/h.	This section of Te Irirangi Drive has a mean operating speed of 55.51 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Haven Drive:</b> 50 km/h</li> <li><b>Leixlep Lane:</b> 60 km/h</li> <li><b>Brinlack Drive:</b> 50 km/h</li> <li><b>Aaronville Way:</b> 50 km/h</li> <li><b>Chapelton Drive:</b> 50 km/h</li> <li><b>Smales Road:</b> 60 km/h</li> <li><b>Kellaway Drive:</b> 50 km/h</li> <li><b>Sheddings Lane:</b> 50 km/h</li> <li><b>Gransna Lane:</b> 50 km/h</li> <li><b>Wando Lane:</b> 50 km/h</li> <li><b>Banville Road:</b> 50 km/h</li> <li><b>Shingleton Lane:</b> 50 km/h</li> <li><b>Moravale Lane:</b> 50 km/h</li> <li><b>Accent Drive:</b> 60 km/h</li> </ul>	

	<ul style="list-style-type: none"> <li><b>Trearey Lane:</b> 50 km/h</li> <li><b>Bishop Dunn Place:</b> 50 km/h</li> <li><b>Ormiston Road:</b> 60km/h</li> <li><b>Botany Way:</b> 50 km/h</li> <li><b>Florence Carter Avenue:</b> 50 km/h</li> </ul>
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AT also had regard to		
Current speed limit	Section 3 The existing speed limit is 60 km/h.	Section 4 The existing speed limit is 60 km/h.
MegaMaps 85 <sup>th</sup> Percentile Mean Operating Speed (km/h)	This section of Te Irirangi Drive has a mean operating speed of 49.33 km/h.	This section of Te Irirangi Drive has a mean operating speed in the range of 40.03 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Whetstone Road:</b> 50 km/h</li> <li><b>Belinda Avenue:</b> 50 km/h</li> <li><b>Penion Drive:</b> 50 km/h</li> <li><b>Dawson Road:</b> 50 km/h</li> <li><b>Boundary Road:</b> 50 km/h</li> <li><b>Charntay Avenue:</b> 50 km/h</li> <li><b>Othello Drive:</b> 50 km/h</li> <li><b>Leila Place:</b> 50 km/h</li> <li><b>Shalimar Place:</b> 50 km/h</li> <li><b>Sandrine Avenue:</b> 50 km/h</li> <li><b>Diorella Drive:</b> 50 km/h</li> <li><b>Great South Road:</b> 60 km/h</li> </ul>	

#### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	5	48
DSI crashes during the period	1	4
Corridor Length (km)	0.34	4.63
Annual Daily Traffic	13,039	12,549

Required Information for safety metrics calculations	Section 3	Section 4
Crash Analysis Period (years)	5	5
Total injury crashes during period	31	13

DSI crashes during the period	7	2
Corridor Length (km)	2.285	0.32
Annual Daily Traffic	13,456	16,685

Section 1:

- o The Collective Risk score is **0.58**. For Urban areas this corresponds to a Collective Risk band of **High**.
- o The Personal Risk score is **12.39**. For Urban areas this corresponds to a Personal Risk band of **High**.

Section 2:

- o The Collective Risk score is **0.17**. For Urban areas this corresponds to a Collective Risk band of **Medium-High**.
- o The Personal Risk score is **3.76**. For Urban areas this corresponds to a Personal Risk band of **Low**.

Section 3:

- o The Collective Risk score is **0.61**. For Urban areas this corresponds to a Collective Risk band of **High**.
- o The Personal Risk score is **12.47**. For Urban areas this corresponds to a Personal Risk band of **High**.

Section 4:

- o The Collective Risk score is **1.25**. For Urban areas this corresponds to a Collective Risk band of **High**.
- o The Personal Risk score is **20.52**. For Urban areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.0	Divided-traversable	3.0
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Commercial big box	4.0	Controlled access	2.0
Intersection density (per km)	5 to <10	2.6	2 to <3	1.3
Access density (per km)	10 to <20	1.1	2 to <5	1.03

Traffic volume	>12000	3.0	>12000	3.0
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Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.0	Divided-traversable	3.0
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Wide shoulder	1.79
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3.0	Commercial big box	4.0
Intersection density (per km)	2 to <3	1.3	5 to <10	2.6
Access density (per km)	>20	1.3	2 to <5	1.03
Traffic volume	>12000	3.0	>12000	3.0

Section 1:

- o The Infrastructure Risk Rating Score is 2.42. For Urban areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- o The Infrastructure Risk Rating Score is 1.77. For Urban areas this corresponds to an IRR band of **Low-Medium**.

Section 3:

- o The Infrastructure Risk Rating Score is 2.05. For Urban areas this corresponds to an IRR band of **Medium**.

Section 4:

- o The Infrastructure Risk Rating Score is 2.22. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Te Irirangi Drive between Ti Rakau Drive and Te Koha Road.

- 50 km/h on Te Irirangi Drive between Te Koha Road and 100m north of Belinda Avenue.
- 50 km/h Te Irirangi Drive between 100m north of Belinda Avenue and State Highway 1.
- 50 km/h Te Irirangi Drive between State Highway 1 and Great South Road.

Te Irirangi Drive is a self-explaining roads as the mean operating speeds is near the proposed safe and appropriate speeds, despite the existing 80 km/h & 60 km/h speed limit.

Engineering up of Te Irirangi Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Te Irirangi Drive due to a multitude of factors. These being the medium lane and very narrow shoulder width, straight nature of the road and moderate road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as "High" and 'High' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows three hundred seventy-seven crashes in the last 5 years including two fatal, twelve serious, eighty-three minor, and two hundred eighty non-injury crashes.

After considering all of the above factors, the existing speed limit of 80/60 km/h on Te Irirangi Drive in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Te Kare Road (Glen Innes)

The speed limit on Te Kare Road, Glen Innes, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Kare Road connects to Sunnymead Road to the north and Taniwha Street to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Te Kare Road is classified as an Access road under the one network road classification (ONRC). Te Kare Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Kare Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0 m to &lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Kare Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Aveline Place: 50km/h (proposed 30km/h)</li> <li>• Sunnymead Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Te Kare Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Kare Road, the actual operating speed estimated using the MegaMaps tool is: <30 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Nohotu Road (Glen Innes)

The speed limit on Te Nohotu Road, Glen Innes, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Nohotu Road connects to Aveline Place to the north and Sunnymead Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Te Nohotu Road is classified as an Access road under the one network road classification (ONRC). Te Nohotu Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Nohotu Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0 m to &lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Nohotu Road has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Aveline Place: 50km/h (proposed 30km/h)</li> <li>Sunnymead Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Te Nohotu Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Nohotu Road, the actual operating speed estimated using the MegaMaps tool is: <30 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – The Avenue (Lucas Hights)**

The speed limit on The Avenue, Lucas Hights (between Paremoremo Road and 200m east of Paremoremo Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Avenue connects to Hobson Road to the north and Paremoremo Road to the south. This road provides access to residential properties.</p> <p>The Avenue is approximately 0.21 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>The Avenue is a two-way, two-lane, undivided road. There are no pedestrian amenities and no cyclist amenities. There exists on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: zero fatal, zero serious, two minor and two non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of The Avenue were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5,679 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of The Avenue has a mean operating speed in the range of 55.7 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Hobson Road:</b> 60 km/h</li> <li>• <b>Paremoremo Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	0
Corridor Length (km)	0.21
Annual Daily Traffic	5679

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is 2.21. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation: 50 km/h The Avenue from existing 50 km/h to the intersection of Hobson Road and Paremoremo Road*

The Avenue is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of the Avenue was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for The Avenue due to a multitude of factors. These being the medium lane and very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows two crashes in the last 5 years including zero fatal, zero serious, two minor, and two non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on The Avenue in Lucas Heights, is not considered to be a safe and appropriate speed limit for this section of road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Thomas Road (Flat Bush)

The speed limit on Thomas Road, Flat Bush (between 125m east of Joseph Street and Murphys Road) been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Thomas Road connects to Murphys Road to the east, Tannaghmore Drive, Bushfield Drive, Drumbuoy Drive to the north, Thomas Road to the west and Piwari Place and Aklander Rise, Elevation Street to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.79 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: zero fatal, zero serious, one minor and five non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Thomas Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street

Requirement	Comments
	<i>parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 379 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes..

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in the range of 50.59 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Murphys Road:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Elevation Street:</b> 50 km/h</li> <li><b>Aklander Rise:</b> 50 km/h</li> <li><b>Tannaghmore Drive:</b> 50 km/h</li> <li><b>Bushfield Drive:</b> 50 km/h</li> <li><b>Drumbuoy Drive:</b> 50 km/h</li> <li><b>Piwari Place:</b> 50 km/h</li> <li><b>Thomas Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1

DSI crashes during the period	0
Corridor Length (km)	0.79
Annual Daily Traffic	379

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.10. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the section of Thomas Road, Flat Bush between 125m east of Joseph Street and Murphys Road.*

Thomas Road is a self-explaining road as the mean operating speeds (50.59 km/h) are near the proposed safe and appropriate speeds and matches the existing 50 km/h speed limit. Engineering up of Thomas Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Thomas Road due to a multitude of factors. These being the narrow lane and shoulder width and high road-side hazards. This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows six crashes in the last 5 years including zero fatal, zero serious, one minor, and five non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Thomas Road in Flat Bush, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ti Rakau Drive (East Tamaki)

Ti Rakau Drive, East Tamaki, is divided into two sections as follows:<sup>1</sup>

1. Section 1: Ti Rakau Drive Between Pakuranga Road and 275m east of Gossamer Drive
2. Section 2: Ti Rakau Drive Between 275m east of Gossamer Drive and Chapel Road/ Dannemora Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Ti Rakau Drive, East Tamaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Ti Rakau Drive connects to Pakuranga Road, Marriott Road, Chevis Place, Gossamer Drive, Burswood Drive, Torrens Road and Botany Road to the north, Tiraumea Drive, Mattson Road, Roseburn Place, Edgewater Drive, Wheatley Avenue, Fremantle Place, Trugood Drive, Harris Road, Greenmount Drive, Huntington Drive, Amara Place and Te Irirangi Drive to the south, Aylesbury Street, Reeves Road, Chapel Road and Dannemora Drive to the east and Palm Avenue and South Eastern Highway to the west. This road provides access to commercial and residential properties.	
	This section is approximately 2.27 km in length. It is classified as a regional road under the one network road classification (ONRC).	This section is approximately 2.64 km in length. It is classified as a regional road under the one network road classification (ONRC).
	This section is a two-way, four-lane, divided road. There are pedestrian amenities and on-	This section is a two-way, four-lane, divided road. There are no on-street parking and no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	street parking along this section. There are no cyclist amenities.	cyclist amenities along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>hundred and fifty-six</b> crashes between 2016 and 2020: zero fatal, six serious, nineteen minor and hundred and thirty-one non-injury crashes. This resulted in six Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records <b>two hundred and twenty-four</b> crashes between 2016 and 2020: two fatal, six serious, forty-seven minor and hundred and sixty-nine non-injury crashes. This resulted in eight Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Ti Rakau Drive is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ti Rakau Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "	The adjacent land use is classified as Commercial Big box using on-site information and geomaps. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	

Requirement	Comments	
	Section 1	Section 2
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 19,235 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 19,694 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 26/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of has a mean operating speed in the range of 48.43 km/h.	This section of has a mean operating speed in the range of 42.95 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Pakuranga Road:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Marriott Road:</b> 50 km/h</li> <li><b>Chevis Place:</b> 50 km/h</li> <li><b>Gossamer Drive:</b> 50 km/h</li> <li><b>Burswood Drive:</b> 50 km/h</li> <li><b>Torrens Road:</b> 50 km/h</li> <li><b>Botany Road:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Tiraumea Drive:</b> 50 km/h</li> <li><b>Mattson Road:</b> 50 km/h</li> <li><b>Roseburn Place:</b> 50 km/h</li> <li><b>Edgewater Drive:</b> 50 km/h</li> <li><b>Wheatley Avenue:</b> 50 km/h</li> <li><b>Fremantle Place:</b> 50 km/h</li> <li><b>Trugood Drive:</b> 50 km/h</li> <li><b>Harris Road:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Greenmount Drive:</b> 50 km/h</li> <li><b>Huntington Drive:</b> 50 km/h</li> <li><b>Amera Place:</b> 50 km/h</li> </ul>	

	<ul style="list-style-type: none"> <li><b>Te Irirangi Drive:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Aylesbury Street:</b> 50 km/h</li> <li><b>Reeves Road:</b> 50 km/h</li> <li><b>Chapel Road:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Dannemora Drive:</b> 50 km/h</li> <li><b>Palm Avenue:</b> 50 km/h</li> <li><b>South-Eastern Highway:</b> 80 km/h (proposed 80 km/h)</li> </ul>
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### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	25	55
DSI crashes during the period	6	8
Corridor Length (km)	2.27	2.64
Annual Daily Traffic	19,235	19,694

- Section 1
  - The Collective Risk score is 0.53. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 7.53. For urban areas this corresponds to a Personal Risk band of **Medium-High**
- Section 2
  - The Collective Risk score is 0.61. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 8.44. For urban areas this corresponds to a Personal Risk band of **Medium-High**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.00	Divided-traversable	3.00
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43

Adjacent land use	Urban residential	3.00	Commercial big box	4.00
Intersection density (per km)	5 to <10	2.60	3 to <5	1.50
Access density (per km)	>20	1.30	10 to <20	1.10
Traffic volume (vpd)	>12000	3.00	>12000	3.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.62. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Ti Rakau Drive between Pakuranga Road and 275m east of Gossamer Drive (section 1)
- 50 km/h on Ti Rakau Drive Between 275m east of Gossamer Drive and Chapel Road/ Dannemora Drive (section 2)

Ti Rakau Drive (Section 1 and 2) is a self-explaining road as the mean operating speeds (48.43 km/h and 42.95 km/h) are below the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Ti Rakau Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Ti Rakau Drive (Section 1 and 2) due to a multitude of factors. These being the very narrow shoulder width and low mean operating speed. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Medium-High' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from WK NZTA's CAS database shows three hundred and eighty crashes in the last 5 years including two fatal, twelve serious, sixty-six minor, and three hundred non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Ti Rakau Drive in East Tamaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Totara Avenue (New Lynn)

The speed limit on Totara Avenue, New Lynn (between Great North Road and Mccorquindale Lane) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Totara Avenue connects McCrae Way on the north to Totara Avenue on the south. This road provides access to commercial centre and parking spaces.</p> <p>Totara Avenue is approximately 0.15 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>Totara Avenue is a two-lane, undivided road. This street is a Shared zone for all road users with on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Totara Avenue were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0m) Very Narrow Shoulder (&lt;0.5m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as "Roads with Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 550 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
Surveyed Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Great North Road:</b> 50 km/h.</li> <li><b>Memorial Drive:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.15
Annual Daily Traffic	550

- The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

## Speed Limit Review – Totara Road (Whenuapai)

Totara Road, Whenuapai (between 45m north of Dale Road and 50m west of Karaka Road), is divided into three sections as outlined below:

1. Section 1: Totara Road between 45m north of Dale Road and McKean Road
1. Section 2: Totara Road between McKean Road and 275m north of McKean Road
2. Section 3: Totara Road between 275m north of McKean Road and 50m west of Karaka Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Totara Road, Whenuapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Section 1	Section 2	Section 3
	Totara Road connects to Dale Road to the south. This road provides access to residential properties.	Totara Road connects to McKean Road to the west. This road provides access to residential properties.	Totara Road connects to Karaka Road to the south and Waimarie Road to the east. This road provides access to residential properties.
	Totara Road is approximately 1.23 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	Totara Road is approximately 0.27 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	Totara Road is approximately 0.89 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	Totara Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along	Totara Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	Totara Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Commercial big box	4.0
Intersection density (per km)	>10	5.00
Access density (per km)	10 to <20	1.10
Traffic volume	1000 to <6000	1.40

- The Infrastructure Risk Rating Score is **2.92**. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 10 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 10 km/h Totara Avenue (between Great North Road and Mccorquindale Lane).*

A proposed speed limit of 10 km/h was selected for this road primarily due to a multitude of factors. These being the Shared Zone, narrow lane width, very narrow shoulder width, curved nature of the road, high roadside hazards and commercial big box land use. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 50 km/h on Totara Avenue in New Lynn is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 10 km/h, which is aligned with the recommended safe and appropriate speed. The existing mean operating speed of *Totara Avenue* is 20 km/h. Although the speed is higher than the recommended speed limit of 10 km/h, the road environment is self-explained as a low speed shared environment. Also, this is aligned with the speed limit at other shared zones. The proposed change of speed limit will be a challenging conversation.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

Requirement	Comments		
	this road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	this road, and there is no on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, zero serious, zero minor and one non-injury crash and therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Totara Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Urban Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Urban Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>

Requirement	Comments		
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,842 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2,842 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2,842 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to			
Current speed limit	The existing speed limit is 80 km/h.	Repeat	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Totara Road has a mean operating speed of 62.09 km/h.	This section of Totara Road has a mean operating speed of 65.2 km/h.	This section of Totara Road has a mean operating speed of 53.8 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Dale Road:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Mckean Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Karaka Road:</b> 50 km/h</li> <li><b>Waimarie Road:</b> 50 km/h</li> </ul>		

#### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2	Section 3

Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.23	0.27	0.89
Annual Daily Traffic	2,842	2,842	2842

Section 1:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

Section 2:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

Section 3:

- o The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Straight	1.0	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28	Moderate	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5	Rural residential	1.5

Intersection density (per km)	<1	1.0	<1	1.0	1 to <2	1.2
Access density (per km)	10 to <20	1.1	10 to <20	1.1	10 to <20	1.1
Traffic volume	1000 to <6000	1.4	1000 to <6000	1.4	1000 to <6000	1.4

Section 1:

- o The Infrastructure Risk Rating Score is 1.8. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- o The Infrastructure Risk Rating Score is 1.54. For Rural areas this corresponds to an IRR band of **Medium**.

Section 3:

- o The Infrastructure Risk Rating Score is 1.40. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

Section 1, 2 and 3: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Totara Road between 45m north of Dale Road and McKean Road
- 60 km/h Totara Road between McKean Road and 275m north of McKean Road
- 60 km/h Totara Road between 275m north of McKean Road and 50m west of Karaka Road

Totara Road (section 1,2 and 3) is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 70 and 80 km/h speed limit. Engineering up of Riverlea Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Totara Road due to a multitude of factors. These being the narrow lane and shoulder width, curved/straight nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor, and one non-injury crashes.

After considering all of the above factors, the existing speed limit of 70 and 80 km/h on Totara Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for section 1, 2 and 3 is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Trig Road (Whenuapai)**

The speed limit on Trig Road, Whenuapai (between 50m northwest of Ryans Road and Brigham Creek Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trig Road connects to Brigham Creek Road to the north. This road provides access to residential properties.</p> <p>Trig Road is approximately 1.92 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>Trig Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twelve crashes between 2016 and 2020: zero fatal, one serious, four minor and seven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Trig Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,960 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Trig Road has a mean operating speed of 60.6 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Spedding Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Brigham Creek Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	5
DSI crashes during the period	1
Corridor Length (km)	1.92
Annual Daily Traffic	6,960

- The Collective Risk score is **0.10**. For Rural areas this corresponds to a Collective Risk band of **Medium**.
- The Personal Risk score is **4.09**. For Rural areas this corresponds to a Personal Risk band of **Low-Medium**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.10
Traffic volume	6000 to <12000	2.2

- The Infrastructure Risk Rating Score is **2.09**. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation: 60 km/h Trig Road between 50m northwest of Ryans Road and Brigham Creek Road.*

Trig Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Trig Road was considered, but dismissed due to the substantial and costly upgrades that would be required.

The cost to do this would substantially outweigh any benefits. A proposed speed limit of 60 km/h was selected for Trig Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows twelve crashes in the last 5 years including zero fatal, one serious, four minor and seven non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Trig Road in Whenuapai, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Upper Harbour Drive (Greenhithe)

The speed limit on Upper Harbour Drive, Greenhithe (between 105m east of Tauhinu Road and Albany Highway) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Upper Harbour Drive connects to Tauhinu Road and William Pitcher Place to the south, Shelter Drive and Albany Highway to the north, Bernard Magnus Lane, Greenhithe Lane and Emily Lane to the west and Kereru Gr and Dene Court Lane to the east. This road provides access to residential properties.</p> <p>Upper Harbour Drive is approximately 3.75 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>Upper Harbour Drive is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this road. There are cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirteen crashes between 2016 and 2020: zero fatal, one serious, six minor and six non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Upper Harbour Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,445 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 05/08/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Upper Harbour Drive has a mean operating speed in the range of 60.2 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tauhinu Road:</b> 50 km/h</li> <li><b>William Pitcher Pl:</b> 50 km/h</li> <li><b>Shelter Drive:</b> 50 km/h</li> <li><b>Bernard Magnus Lane:</b> 50 km/h</li> <li><b>Greenhithe Road:</b> 50 km/h</li> <li><b>Viridian Lane:</b> 50 km/h</li> <li><b>Kereru Gr:</b> 50 km/h</li> <li><b>Emily Lane:</b> 50 km/h</li> <li><b>Dene Court Lane:</b> 50 km/h</li> <li><b>Albany Highway:</b> 60 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	7

DSI crashes during the period	1
Corridor Length (km)	3.75
Annual Daily Traffic	3,445

- The Collective Risk score is **5.33**. For Urban areas this corresponds to a Collective Risk band of **Low-Medium**.
- The Personal Risk score is **4.24**. For Urban areas this corresponds to a Personal Risk band of **Low-Medium**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.0
Intersection density (per km)	2 to <3	1.3
Access density (per km)	>20	1.3
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 60 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 60 km/h Greenhithe Road between 105m east of Tauhinu Road and Albany Highway.*

Upper Harbour Drive is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Upper Harbour Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Upper Harbour Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows thirteen crashes in the last 5 years including zero fatal, one serious, six minor, and six non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Upper Harbour Drive in Greenhithe, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Upper Orewa Road (Upper Orewa)

The speed limit on Upper Orewa Road (Upper Orewa Road Between Wainui Road and 506m west of Russell Road), Upper Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Upper Orewa Road connects to Wainui Road to the south and Russel Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.33 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: zero fatal, zero serious, one minor and one non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Upper Orewa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use for is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist</i>

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps / 85 <sup>th</sup> percentile Mean Operating Speed (km/h)	This section of Upper Orewa Road has a mean operating speed of 81 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wainui Road:</b> 100 km/h</li> <li><b>Russell Road:</b> 100 km/h (proposed 40 km/h)</li> <li><b>Weranui Road:</b> 100km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.33
Annual Daily Traffic	1,260

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature		
	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.10
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is **1.86**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation:*

- 60 km/h Between Wainui Road and 506m west of Russell Road.

A proposed speed limit of 60 km/h was selected for Upper Orewa Road due to the medium lane width, very narrow shoulder width, curved nature of the road, high road side hazards and local land use which contributes to the sections 'Medium-High' IRR score, making it a high-risk section of road.

Crash history from NZTA's CAS database shows two crashes in the last 5 years including zero fatal, zero serious, one minor, and one non-injury crashes.

The proposed speed will be challenging conversation, given that the existing speed limit of Upper Orewa Road is 50 km/h, the existing mean operating speed of Upper Orewa Road is 81 km/h and the recommended speed limit of 60 km/h.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Vaughans Road (Okura)

Vaughans Road, Okura, is divided into two sections as outlined below:

1. Section 1: Vaughans Road Between Okura River Road and 440 m south of Ridgelea Road
2. Section 2: Vaughans Road Between 440 m south of Ridgelea Road and Piripiri Point Drive

The speed limit on Vaughans Road, Okura has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Vaughans Road connects to Okura Rier Road to the west and Ridgelea Road to the south. This road provides access to residential properties.	Vaughans Road connects to Piripiri Road to the north. This road provides access to residential properties.
	Vaughans Road is approximately 1.31 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).	Vaughans Road is approximately 0.96 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	Vaughans Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Vaughans Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and

Requirement	Comments	
		therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Vaughans Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 731 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 731 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vaughans Road has a mean operating speed of 48.3 km/h.	This section of Vaughans Road has a mean operating speed of 43.4 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Okura River Road:</b> 80 km/h (proposed 60km/h)</li> <li>• <b>Ridgelea Road:</b> 50 km/h</li> <li>• <b>Piripiri Point Drive:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.43	0.84
Annual Daily Traffic	731	731

Section 1:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to Personal Risk band of **Low**.

Section 2:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7

Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	2 to <3	1.3
Access density (per km)	>20	1.3	10 to <20	1.1
Traffic volume	<1000	1.0	<1000	1.0

Section 1:

- o The Infrastructure Risk Rating Score is **1.58**. For Rural areas this corresponds to an IRR band of **Medium**.

Section 2:

- o The Infrastructure Risk Rating Score is **1.55**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

For section 1 & 2 the safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- *60 km/h on Vaughans Road Between Okura River Road and 440m south of Ridgelea Road (section 1)*
- *50 km/h on Vaughans Road Between 440m south of Ridgelea Road and Piripiri Point Drive (section 2)*

Vaughans Road is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Riverlea Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h for section 1 and 50 km/h section 2 was selected for Vaughans Road due to a multitude of factors. These being the land use, narrow lane and very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed. For section 2, this section of Vaughans Road is becoming urbanised and the new development will change the existing road environment. The residential developments are likely to reduce the operating speed.

After considering all of the above factors, the existing speed limit of 80 km/h on Vaughans Road in Okura, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for section 1 and 50 km/h for section 2 which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Vermont Street (Ponsonby)

The speed limit on Vermont Street, Ponsonby has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vermont Street connects to Stuart Street to the north, Ponsonby Road to the East and John Street to the West. This road provides access to residential properties.</p> <p>This section is approximately 0.61 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor and two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Vermont Street were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist</i>

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22.91 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ponsonby Road:</b> 40 km/h.</li> <li>• <b>John Street:</b> 50 km/h.</li> <li>• <b>Stuart Street:</b> 50 km/h (proposed 30 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.62
Annual Daily Traffic	2,180

- The Collective Risk score is **0.00**. For urban areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is **0.00**. For urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.30
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **2.12**. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h Vermont Street (Full Length).*

Vermont Street is a self-explaining road as the mean operating speeds (22.91 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Vermont Street was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for this road due to multitude of factors. These being narrow lane width, very narrow shoulder width, moderate roadside hazards and low mean operating speeds (<40 km/h). This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from NZTA's CAS database shows three crashes in the last 5 years including one minor and two non-injury crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Vermont Street in Waitemata, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Vermont Street is 30 km/h which is lower than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (22.91 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Waimanu Awa Road (Ararimu)**

The speed limit on Waimanu Awa Road, Ararimu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimanu Awa Road connects to Great South Road and on the western end of Waimanu Awa Road is a no exit road. This road provides access to residential properties.</p> <p>This section is approximately 1.12km in length. It is classified as an access road under the one network road classification (ONRC).</p> <p>Waimanu Awa Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road. There is no on-street parking along Waimanu Awa Road.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020. Waimanu Awa Road therefore has no Death and Serious Injury (DSI) crashes. CAS includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waimanu Awa Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>

Requirement	Comments
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using the drive over footage. The IRR defines Rural Residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/ factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersection per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	No traffic volume data is available, but an estimated ADT is 200 vpd.
(i) any planned modification to the road; and	There are no known planned modifications to Waimanu Awa Road.
(j) the views of interested persons and groups.	The programme team have undertaken early engagement with key partners and stakeholders on the first stage of Tranche 2. This has included the Automobile Association, Auckland Council Safety Collective, Auckland Regional Public Health Service / Healthy Auckland Together, Bike Auckland, Fire and Emergency, Greater Auckland, Kainga Ora, NZ Police, Road Transport Forum, Safekids Aotearoa, Walk Auckland and Waka Kotahi. Potential changes to the speed limits in this area were presented to the Local Board via meetings on 20 April 2021 and 1 June 2021. More detailed feedback is anticipated from each group during public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Waimanu Awa Road is 100 km/h
MegaMaps Mean Operating Speed (km/h)	A MegaMaps operating speed is not available for Waimanu Awa Road, but the estimated operating speed on the road is 40 km/h
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Great South Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.12
Annual Daily Traffic	Approx. 200 vpd

The Collective Risk score is 0.00, and the Personal Risk score is 0.0. For rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume	< 1,000 vpd	1.00

The Infrastructure Risk Rating Score is 1.8. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Waimanu Awa Road*

Waimanu Awa Road is expected to be a self-explaining road as the operating speeds are estimated to be below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Waimanu Awa Road was considered but dismissed due to the substantial and costly upgrades that would be required for what is a low volume, low classification road. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected due to the narrow, winding alignment of the road, moderate roadside hazards and its access function. These factors also contribute to the roads “Medium-High” IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the speed limit of 100 km/h on Waimanu Awa Road in Ararimu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit aligns with the Speed Management Guide (<80 km/h) and is considered appropriate given the nature and function of the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Waina Drive (Kumeu)**

The speed limit on Waina Drive, Kumeu, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waina Drive connects to Van Rixel Drive to the east. This road provides access to residential properties and is approximately 0.03km in length.</p> <p>Waina Drive is classified as an Access road under the one network road classification (ONRC). Waina Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waina Drive were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0 m to &lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waina Drive has a mean operating speed in the range of <30km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Van Rixel Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Waina Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waina Drive, the actual operating speed estimated using the MegaMaps tool is: <30 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waipuna Road (Mount Wellington)

The speed limit on Waipuna Road, Mount Wellington (between 20m east of Levene Place and 20 m east of Pinn Place) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waipuna Road connects to Waipuna Road and Levene Place to the north and South-Eastern Highway to the south. This road provides access to South-Eastern Highway.</p> <p>This section is approximately 0.26 km in length. It is classified as a Regional road under the one network road classification (ONRC).</p> <p>This section is a two-way, multi-lane, divided traversable road. There are no pedestrian amenities, cycle amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records fifteen crashes between 2016 and 2020: zero fatal, one serious, two minor and twelve non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Waipuna Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided traversable.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist

Requirement	Comments
	<i>activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km.</li> <li><b>Access density:</b> &lt;1 access per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,737 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed of actual value 46.6 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Levene Place:</b> 50 km/h</li> <li><b>Waipuna Road (north):</b> 50 km/h</li> <li><b>South Eastern Highway:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	0.26
Annual Daily Traffic	6,737

- The Collective Risk score is **0.78**. For Urban areas this corresponds to a Collective Risk band of **High**

- The Personal Risk score is **17.02**. For Urban areas this corresponds to a Personal Risk band of **High**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Divided-traversable	3.00
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	>10	5.00
Access density (per km)	<1	1.00
Traffic volume	6000 to <12000	2.20

The Infrastructure Risk Rating Score is **2.3**. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Waipuna Road (between 20m east of Levene Place and South Easter Highway).*

A proposed speed limit of 50 km/h was selected for this section of Waipuna Road due to multitude of factors. These being the very narrow shoulder width, curved nature of the road, moderate roadside hazards and local land use. All of these factors contribute to the road's 'Medium' IRR score. Both the collective and personal risk of this road are classified as 'High' due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>This proposed speed was also chosen in order to ensure consistency with the surrounding network

Crash history from WK NZTA's CAS database shows fifteen crashes in the last 5 years including zero fatal, one serious, two minor, and twelve non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h at this section of Waipuna Road in Mount Wellington, is not considered to be a safe and appropriate speed limit.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

The existing mean operating speed of Waipuna Road is 46.6 km/h and it is close to the recommended speed limit of 50 km/h. Due to the mean operating speed and the length of the road section physical interventions are not required.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Waitoki Road (Wainui)

The speed limit on Waitoki Road, Wainui (between Pebble Brook Road and Wainui Road) has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waitoki Road connects to Pebble Brook Road to the west and Wainui Road to the north. This road provides access to residential properties and is approximately 1.60 km in length.</p> <p>Waitoki Road is classified as a Primary Collector Road under the one network road classification (ONRC). Waitoki Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: zero fatal, zero serious, one minor and two non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Waitoki Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder 0.5-1.0 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as a "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,193 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Auckland Transport proposed to install new school gateway treatment for Wainui School
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waitoki Road has a mean operating speed in the range of 80 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Pebble Brook Road:</b> 100 km/h.</li> <li><b>Wainui Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.606
Annual Daily Traffic	1,193

- The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Narrow shoulder	1.45
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	10 to <20	1.10
Traffic volume	1000 to <6000	1.4

- The Infrastructure Risk Rating Score is **1.66**. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h between Pebble Road and Wainui Road.*

Waitoki Road is a road requiring engineering down interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed. Engineering up of Waitoki Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Waitoki Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, curved nature of the road and moderate road side hazards. All these factors contribute to the roads 'Medium-High' IRR score, making it a high-risk section of road.

Crash history from WK NZTA's CAS database shows three crashes in the last 5 years including zero fatal, zero serious, one minor, and two non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Waitoki Road in Wainui, is not considered to be a safe and appropriate speed limit for this section of road.

Given that the existing mean operating speed of Waitoki Road is 80 km/h and higher than the recommended speed limit of 60 km/h, physical interventions are required to engineer down the road environment in order to reduce travel speeds accordingly. Auckland Transport has plan to install new gateway treatment for school and highlight the speed change.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Walmsley Road (Mangere)

The speed limit on Walmsley Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Walmsley Road connects to Mahunga Drive and Waterview Road to the north, Miller Road, Mckenzie Road and Coronation Road to the west, Favona Road, Robertson Road to the east and Hall Avenue and Donnell Avenue to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.08 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities along this road. There are no cyclist amenities and on street parking.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records eighty-six crashes between 2016 and 2020: zero fatal, two serious, twenty-one minor and sixty-three non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Walmsley Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Walmsley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very wide shoulder (&gt;2.0 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated

Requirement	Comments
	<i>by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 21,207 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13/10/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed	This section has a mean operating speed km/h 43.13 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Miller Road:</b> 50 km/h.</li> <li><b>Mckenzie Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Coronation Road:</b> 60 km/h.</li> <li><b>Favona Road:</b> 60 km/h (proposed 50 km/h).</li> <li><b>Robertson Road:</b> 50 km/h.</li> <li><b>Mahunga Drive:</b> 50 km/h.</li> <li><b>Waterview Road:</b> 50 km/h.</li> <li><b>Hall Avenue:</b> 50 km/h.</li> <li><b>Donnell Avenue:</b> 50 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	23

DSI crashes during the period	2
Corridor Length (km)	1.08
Annual Daily Traffic	21,207

- The Collective Risk score is **0.37**. For urban areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is **4.80**. For urban areas this corresponds to a Personal Risk band of **Low-Medium**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very wide shoulder	0.78
Roadside hazards	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	>20	1.30
Traffic volume	>12000	3.00

The Infrastructure Risk Rating Score is **2.66**. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50 km/h Walmsley Road (Full Length).*

Walmsley Road is a self-explaining road as the mean operating speeds is below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of Walmsley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Walmsley Road due to multitude of factors. These being medium lane width, very wide shoulder width, high roadside hazards and urban residential land use. All of these factors contribute to the road's 'Medium- High' IRR score. The collective and personal risk of this road are classified as '**High**' and '**Low-Medium**' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup> This proposed speed was also chosen in order to ensure consistency with the surrounding network.

Crash history from WK NZTA's CAS database shows eighty-six crashes in the last 5 years including zero fatal, two serious, twenty-one minor, and sixty-three non-injury crashes.

After considering all the above factors, the existing speed limit of 60 km/h on Walmsley Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Whangaparaoa Road (Whangaparaoa)

The speed limit of two sections of Whangaparaoa Road, Whangaparaoa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

1. Section 1: Whangaparaoa Road Red Beach Road to 170m southeast of Dobell Road
2. Section 2: Whangaparaoa Road between 135m north of Roberts Road and 80m northeast of Gulf Harbour Drive

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Whangaparaoa Road connects to Red Beach Road, Vista Motu, Marellan Drive, Glenelg Road, Shadon Place and Dobell Road to the north, Chenery Road, Matheson Road and Blue Heron Road to the south, Vipond Road and Melia Place to the east and Polar Road to the west. This road provides access to residential properties.	Whangaparaoa Road connects to Gulf Harbour Drive to the north. This road provides access to residential properties.
	Whangaparaoa Road is approximately 2.47 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).	Whangaparaoa Road is approximately 0.89 km in length. It is classified as an Arterial Road under the one network road classification (ONRC).
	Whangaparaoa Road is a two-way, two-lane, undivided road. There are pedestrian amenities along this section. There are no cyclist amenities and on-street parking.	Whangaparaoa Road is a two-way, two-lane, undivided road. There are pedestrian amenities along this section. There are no cyclist amenities and on-street parking.
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records sixty crashes between 2016 and 2020: one fatal, seven serious, eleven minor and forty-one non-injury crashes. This resulted in eight	NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: zero fatal, zero serious, one minor and 6 non-injury crashes and therefore no Death and Serious

Requirement	Comments	
	Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.  Whangaparaoa Road is identified as one of the top 10% DSI saving network sections for New Zealand.	Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Whangaparaoa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25,725 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 12,259 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are planned modifications along Whangaparaoa Road	

Requirement	Comments
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Whangaparaoa Road has a mean operating speed of 57 km/h	This section of Whangaparaoa Road has a mean operating speed of 58 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Red Beach Road:</b> 50 km/h</li> <li>• <b>Chenery Road:</b> 50 km/h</li> <li>• <b>Vista Motu:</b> 50 km/h</li> <li>• <b>Matheson Road:</b> 50 km/h</li> <li>• <b>Marellen Drive:</b> 50 km/h</li> <li>• <b>Glenelg Road:</b> 50 km/h</li> <li>• <b>Vipond Road:</b> 50 km/h</li> <li>• <b>Melia Place:</b> 50 km/h</li> <li>• <b>Polar Road:</b> 50 km/h</li> <li>• <b>Shandon Place:</b> 50 km/h</li> <li>• <b>Blue Heron Rise:</b> 50 km/h</li> <li>• <b>Dobell Road:</b> 50 km/h</li> <li>• <b>Gulf Harbour Drive:</b> 50 km/h</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	19	1
DSI crashes during the period	8	0
Corridor Length (km)	2.47	0.89
Annual Daily Traffic	25,725	12,259

Section 1:

- o The Collective Risk score is **0.64**. For Urban areas this corresponds to a Collective Risk band of **High**.

- o The Personal Risk score is **6.89**. For Urban areas this corresponds to a Personal Risk band of **Medium**.

Section 2:

- o The Collective Risk score is **0.0**. For Urban areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Urban areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards	Moderate	1.43	High	2.28
Adjacent land use	Urban residential	3.0	Urban residential	3.0
Intersection density (per km)	3 to <5	1.5	1 to <2	1.2
Access density (per km)	>20	1.3	>20	1.3
Traffic volume	>12000	3.0	>12000	3.0

Section 1:

- o The Infrastructure Risk Rating Score is **2.48**. For Urban areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- o The Infrastructure Risk Rating Score is **2.56**. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Whangaparaoa Road Red Beach Road to 170m southeast of Dobell Road (section 1)
- 50 km/h on Whangaparaoa Road between 135m north of Roberts Road and 80m northeast of Gulf Harbour Drive (section 2)

Whangaparaoa Road is a road requiring engineering down interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed. Engineering up of Whangaparaoa Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Whangaparaoa Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, curved nature of the road, moderate to high road-side hazards. All of these factors contribute to the road's 'High' IRR score. The collective and personal risk of this road are classified as 'High' and 'Medium' for section 1, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

Crash history from WK NZTA's CAS database shows sixty-seven crashes in the last 5 years including one fatal, seven serious, twelve minor, and forty-seven non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Whangaparaoa Road in Hibiscus and Bays, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Whio Way (Stillwater)

The speed limit on Whio Way, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Whio Way connects to Jackson Way to the south. This road is approximately 0.11 km in length.</p> <p>Whio Way is classified as an Access road under the one network road classification (ONRC). Whio Way is a two-way, Two lane undivided road. There are no pedestrian amenities or cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Whio Way were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curve</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural residential using MegaMaps tool. The IRR defines rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as less than 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	No planned modification to the road currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Whio Way has a mean operating speed in the range of 30 to 40 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Jackson Way: 100 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Whio Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.59. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 4: Conclusion**

Existing speed limit: 100km/h

*Proposed safe and appropriate speed limit recommendation = 60km/h.*

Whio Way is a self-explaining road as the mean operating speeds are already at, or below, the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Whio Way was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed limit of 100 km/h on Whio Way, is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed. Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Wilks Road (Dairy Flat)

Wilks Road, Dairy Flat (between East Coast Road and Postman Road) is divided into two sections as outlined below:

1. Section 1: Wilks Road between 115 east of Aeropark Dr and East Coast Road.
2. Section 2: Wilks Road between Postman Road to 115 m east of Aeropark Dr.

The speed limit on Wilks Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Wilks Road connects to Aeropark Road to the south and East Coast Road to the east. This road provides access to residential properties.	Wilks Road connects to Postman Road and Runway Rise to the south. This road provides access to residential properties.
	This section is approximately 0.61 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.87 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: zero fatal, zero serious, zero minor and two non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: zero fatal, zero serious, one minor and three non-injury crashes and therefore no Death and Serious Injury (DSI). This data includes crashes

Requirement	Comments	
	Section 1	Section 2
	for all road users and therefore crash risk for all road users were considered.	for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Wilks Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5-1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,420 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1,420 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wilks Road has a mean operating speed in the range of 74 km/h.	This section of Wilks Road has a mean operating speed in the range of 63.63 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dairy Flat Highway: 80 km/h</li> <li>• Postman Road: 80 km/h</li> <li>• Lascelles Road: 80 km/h</li> <li>• Runway Rise: N/A</li> <li>• Aeropark Road: N/A</li> <li>• East Coast Road: 100 km/h (proposed 80 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	0
Corridor Length (km)	0.61	0.87
Annual Daily Traffic	1,420	1,420

Section 1:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

Section 2:

- o The Collective Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low**.
- o The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1	Section 2

	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.79	Medium lane, Narrow shoulder	1.79
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	<1	1.0	3 to <5	1.5
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume	<1000	1.0	1000 to <6000	1.4

Section 2:

- o The Infrastructure Risk Rating Score is 1.42. For Rural areas this corresponds to an IRR band of **Medium**.

Section 3:

- o The Infrastructure Risk Rating Score is 1.49. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 80 km/h on Wilks Road between 115 east of Aeropark Dr and East Coast Road (section 1)
- 80 km/h on Wilks Road between Postman Road to 115 m east of Aeropark Dr (section 2)

Wilks Road is a road requiring engineering up interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed.

A proposed speed limit of 80 km/h was selected for Wilks Road due to a multitude of factors. These being the medium lane and narrow shoulder width, curved nature of the road, moderate road-side hazards and high mean operating speed.

Crash history from WK NZTA's CAS database shows nine crashes in the last 5 years including zero fatal, one serious, two minor, and six non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Wilks Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 80 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Wiri Station Road (Manukau)**

Wiri Station Road, Manukau, is divided into two sections as follows: <sup>1</sup>

1. Section 1: Wiri Station Road between Ash Road and Druces Road
2. Section 2: Wiri Station Road between Druces Road and Manukau Station Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Wiri Station Road, Manukau has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Wiri Station Road connects to Roscommon Road to the west, Langley Road, Ash Road, Hobill Avenue, Druces Road to the south, Plunket Avenue, Mana Place, Lambie Drive, Manukau Station Road to the north, and Tuaiwi Street to the east. This road provides access to commercial properties.	
	This section is approximately 2.09 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.42 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, multi-lane, undivided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.	This section is a two-way, multi-lane, undivided road. There are pedestrian amenities and cyclist amenities along this section. There is no on-street parking.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>hundred and one</b> crashes between 2016	WK NZTA's Crash Analysis System (CAS) records <b>twenty-</b>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and 2020: zero fatal, two serious, twenty minor and seventy-nine non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	<b>three</b> crashes between 2016 and 2020: zero fatal, one serious, four minor and eighteen non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Wiri Station Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Wiri Station Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided-traversable</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and geomaps. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7,758 vehicles per day (vpd). This	Average daily traffic (ADT) was determined from MegaMaps as 7,240 vehicles per day (vpd).

Requirement	Comments	
	Section 1	Section 2
	level of traffic volume is consistent with the nature of the road and traffic survey.	This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be sent to the Local Board via email in October. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47.86 km/h.	This section has a mean operating speed of 37.3 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Roscommon Road:</b> 80 km/h (proposed 50 km/h)</li> <li>• <b>Langley Road:</b> 50 km/h</li> <li>• <b>Ash Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Hobill Avenue:</b> 50 km/h</li> <li>• <b>Druces Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Plunket Avenue:</b> 50 km/h</li> <li>• <b>Mana Place:</b> 50 km/h</li> <li>• <b>Lambie Drive:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Manukau Station Road:</b> 60 km/h (proposed 50 km/h)</li> <li>• <b>Tuaiwi Street:</b> 50 km/h</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	<b>22</b>	<b>5</b>
DSI crashes during the period	2	1
Corridor Length (km)	2.09	0.42
Annual Daily Traffic	7,758	7,240

- Section 1
  - The Collective Risk score is 0.19. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 6.76. For rural areas this corresponds to a Personal Risk band of **Medium**
- Section 2
  - The Collective Risk score is 0.48. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 18.02. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Divided-traversable	3.00	Divided-traversable	3.00
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Commercial big box	4.00	Urban Residential	3.00
Intersection density (per km)	2 to <3	1.30	5 to <10	2.60
Access density (per km)	10 to <20	1.10	<1	1.00
Traffic volume (vpd)	6000 to <12,000	2.20	6000 to <12,000	2.20

- Section 1
  - The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Wiri Station Road between Roscommon Road and Druces Road (section 1)
- 50 km/h on Wiri Station Road between Druces Road and Manukau Station Road (section 2)

Wiri Station Road is a self-explaining road as the mean operating speeds are near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

Engineering up of Wiri Station Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Wiri Station Road due to a multitude of factors. These being the very narrow shoulder width, and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'High' respectively due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows hundred and twenty-four crashes in the last 5 years including zero fatal, three serious, twenty-four minor, and ninety-seven non-injury crashes.

After considering all of the above factors, the existing speed limit of 60 km/h on Wiri Station Road in Manukau, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Witten Road (Pakiri)

The speed limit on Witten Road, Pakiri has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
	Section 1
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Witten Road connects to Witten Road to the east. This road provides access to residential properties.
	This section is approximately 0.85 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020. Zero fatal, zero serious, zero minor and zero non-injury. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Witten Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Curved.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with

Requirement	Comments
	Section 1
	<i>accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km.</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Pakiri Road:</b> 60 km/h.</li> <li><b>Witten Road:</b> 100 km/h.</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1
Crash Analysis Period (years)	5
Total injury crashes during period	0

DSI crashes during the period	0
Corridor Length (km)	0.85
Annual Daily Traffic	5

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

Feature	Section 2	
	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is 2.1. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h between 1700m North of Witten Road (Pakiri Beach holiday park) to the road end.*

*Witten Road* is a self-explaining road as the mean operating speeds (34.95 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit. Engineering up of *Witten Road* was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Pakiri Road due multitude of factors. These being to unsealed surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor and one non- injury.

After considering all the above factors, the existing speed limit of 60 km/h on *Witten Road* in *Pakiri*, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Woodcocks Road (Warkworth)

Woodcocks Road, Warkworth (between 150m west of Falls Road and Old Kaipara Road), is divided into four sections as outlined below:

1. Section 1: between 150m west of Falls Road and 86m east of Carran Road
2. Section 2: between 86m east of Carran Road and Old Kaipara Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Woodcocks Road, Warkworth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Section 1	Section 2
	Woodcocks Road connects to Falls Road to the North and Wylie Road to the south. This road provides access to residential properties.	Woodcocks Road connects to Carran Road to the north and Old Kaipara Road to the west. This road provides access to residential properties.
	Woodcocks Road is approximately 0.76 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	Woodcocks Road is approximately 2.16 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	Woodcocks Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Woodcocks Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: zero fatal, two serious, one	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one fatal, two serious, one

Requirement	Comments	
	<p>minor and four non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Section 3 of Woodcocks Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>	<p>minor and zero non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Section 4 of Woodcocks Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Woodcocks Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural Residential as a <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,641 vehicles per day (vpd). This level of traffic volume is	Average daily traffic (ADT) was determined from MegaMaps as 935 vehicles per day (vpd). This level of traffic volume is

Requirement	Comments	
	consistent with the nature of the road.	consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 08/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	Section 1	Section 2
	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Woodcocks Road has a mean operating speed of 71.4 km/h.	This section of Woodcocks Road has a mean operating speed of 75.4 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Falls Road: 60 km/h</li> <li>• Wyllie Road: 100 km/h</li> <li>• Carran Road: 100 km/h</li> <li>• Old Kaipara Road: 100 km/h</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	3	4
DSI crashes during the period	2	3
Corridor Length (km)	0.76	2.16
Annual Daily Traffic	2,641	935

Section 1:

- The Collective Risk score is 0.52. For Rural areas this corresponds to a Collective Risk band of **High**.
- The Personal Risk score is 54.10. For Rural areas this corresponds to a Personal Risk band of **High**.

Section 2:

- The Collective Risk score is 0.27. For Rural areas this corresponds to a Collective Risk band of **High**
- The Personal Risk score is 81.24. For Rural areas this corresponds to a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45
Roadside hazards	Moderate	1.43	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	<1	1.0
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	1000 to <6000	1.4	1000 to <6000	1.4

Section 1:

- The Infrastructure Risk Rating Score is 1.65. For Rural areas this corresponds to an IRR band of **Medium-High**.

Section 2:

- The Infrastructure Risk Rating Score is 1.79. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

Section 3 and 4: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation:

- 60 km/h Woodcocks Road between 150m west of Falls Road and 86m east of Carran Road (Section 1)
- 60km/h Woodcocks Road between 86m east of Carran Road and Old Kaipara Road (Section 2)

he proposed speed is a challenging conversation as the existing mean operating speed of Woodcocks Road is higher than the proposed safe and appropriate speed. Engineering up of Road Name was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Woodcocks Road due to a multitude of factors. These being the medium lane and narrow shoulder width, curved nature of the road, high/moderate road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score. The collective and personal risk of this road are classified as 'High' and 'High' respectively due to the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows twenty-seven crashes in the last 5 years including one fatal, five serious, ten minor, and eleven non-injury crashes.

After considering all the above factors, the existing speed limit of 100 km/h on Woodcocks Road section 1 and 2 respectively in Warkworth, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for section 1 and 2 is 60 km/h which is aligned with the recommended safe and appropriate speed.

Given that the existing mean operating speed on section 1 and 2 of Woodcocks Road is 71.4 and 75.4 km /h km/h respectively, and higher than the recommended speed limit of 60 km/h, physical interventions are required to engineer down the road environment in order to reduce travel speeds accordingly.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Worsnop Way (Stillwater)**

The speed limit on Worsnop Way, Stillwater has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Worsnop Way connects to East Coast Road to the south. This road provides access to residential properties.
	This section is approximately 0.37 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).
	Worsnop Way is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Worsnop Way were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using MegaMaps tool. The IRR defines Rural Residential as: <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 341 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 09/09/2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Worsnop Way has a mean operating speed of 37.89 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>East Coast Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.37
Annual Daily Traffic	341

- The Collective Risk score is **0.0**, while For Rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is **0.0**. For Rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
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Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Narrow shoulder	1.79
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1.0

- The Infrastructure Risk Rating Score is 1.75. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Worsnop Way.*

Worsnop Way is a self-explaining road as the mean operating speeds (37.89 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Worsnop Way was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Worsnop Way due to a multitude of factors. These being the medium lane and narrow shoulder width, curved nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Worsnop Way in Stillwater, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Worsnop Way is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Albertson Place (Manurewa)

The speed limit on Albertson Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albertson Place connects to Buller Crescent to the north. This road provides access to residential properties and is approximately 0.075 km in length.</p> <p>Albertson Place is classified as an Access road under the one network road classification (ONRC). Albertson Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albertson Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Albertson Place has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Buller Crescent:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Albertson Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed Albertson Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Anglers Way (Wattle Downs)

The speed limit on Anglers Way, Wattle Downs has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Anglers Way connects to Mahia Road to the south. This road provides access to residential properties and is approximately 0.14 km in length.</p> <p>Anglers Way is classified as an Access road under the one network road classification (ONRC). Anglers Way is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Anglers Way were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Anglers Way has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Anglers Way** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Anglers Way, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashmere Lane (Weymouth)

The speed limit on Ashmere Lane, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashmere Lane Way connects to Sykes Road to the east. This road provides access to residential properties and is approximately 0.20 km in length.</p> <p>Ashmere Lane is classified as an Access road under the one network road classification (ONRC). Ashmere Lane is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashmere Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Ashmere Lane has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Sykes Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Ashmere Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ashmere Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Astor Place (Manurewa)

The speed limit on Astor Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Astor Place connects to Friedlanders Road to the west. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Astor Place is classified as an Access road under the one network road classification (ONRC). Astor Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Astor Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Astor Place has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, Astor Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Astor Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beaumonts Way Extension (Manurewa)

The speed limit on Beaumonts Way Extension, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beaumonts Way Extension connects to Mahia Road to the south. This road provides access to residential properties and is approximately 0.43 km in length.</p> <p>Beaumonts Way Extension is classified as an Access road under the one network road classification (ONRC). Beaumonts Way Extension is a two-lane, undivided road. There are pedestrian amenities with on-street parking. However, there are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beaumonts Way Extension were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to 3 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Beaumonts Way Extension has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Beaumonts Way Extension** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.6. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Beaumonts Way Extension, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Beaumonts Way (Manurewa)**

Beaumonts Way, Manurewa, is divided into two sections as follows: <sup>1</sup>

- Section 1: Beaumonts Way between Weymouth Road and Rogers Road
- Section 2: Beaumonts Way between Rogers Road and the southern end of Beaumonts Way

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Beaumonts Way, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Beaumonts Way connects to Weymouth Road to the north and provides access to residential properties.	
	This section is approximately 0.43 km in length.	This section is approximately 0.2 km in length.
	This section is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is classified as an Access road under the one network road classification (ONRC).
	Beaumonts Way is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI).	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	This data includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Beaumonts Way were determined using desktop information assessment. <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "	
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to 5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1119 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in the range of 35-39 km/h.	This section has a mean operating speed in the range of 20-24 km/h

	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Weymouth Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Beaumonts Way** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 1.8. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2
  - Collective Risk band of Low, and a Personal Risk band of Low
  - The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Beaumonts Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Belleek Close (Weymouth)

The speed limit on Belleek Close, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Belleek Close connects to Glenveagh Park Drive to the east. This road provides access to residential properties and is approximately 0.06 km in length.</p> <p>Belleek Close is classified as an Access road under the one network road classification (ONRC). Belleek Close is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Belleek Close were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Belleek Close has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Glenveagh Park Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Belleek Close** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Belleek Close, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bernina Place (Weymouth)

The speed limit on Bernina Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bernina Place connects to Sykes Road to the east. This road provides access to residential properties and is approximately 0.27 km in length.</p> <p>Bernina Place is classified as an Access road under the one network road classification (ONRC). Bernina Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bernina Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Bernina Place has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sykes Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Bernina Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bernina Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blossom Lane (Manurewa)

The speed limit on Blossom Lane, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blossom Lane connects to Beaumonts Way to the east and Rogers Road to the west. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Blossom Lane is classified as an Access road under the one network road classification (ONRC). Blossom Lane is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blossom Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 291 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Blossom Lane has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Beaumonts Way:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Rogers Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Blossom Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blossom Lane, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bohola Rise (Weymouth)

The speed limit on Bohola Rise, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bohola Rise connects to Glenveagh Park Drive to the west. This road provides access to residential properties and is approximately 0.11 km in length.</p> <p>Bohola Rise is classified as an access road under the one network road classification (ONRC). Bohola Rise is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blossom Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Bohola Rise has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Glenveagh Park Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Bohola Rise** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bohola Rise, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Boon Street (Manurewa)

The speed limit on Boon Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Boon Street connects to Grebe Street to the east and Mahia Road to the south. This road provides access to residential properties and is approximately 0.17 km in length.</p> <p>Boon Street is classified as an Access road under the one network road classification (ONRC). Boon Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Boon Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Boon Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Grebe Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Mahia Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, Boon Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Boon Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Bowater Place (Manurewa)**

Bowater Place, Manurewa, is divided into two sections as follows: <sup>1</sup>

- Section 1: Bowater Place between Weymouth Road and Buller Crescent
- Section 2: Bowater Place between Buller Crescent and Puriri Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Bowater Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Bowater Place connects to Weymouth Road to the north and provides access to residential properties	
	This section is approximately 0.20 km in length.	This section is approximately 0.48 km in length.
	This section is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is classified as an Access road under the one network road classification (ONRC).
	Bowater Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI).	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	This data includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Bowater Place were determined using desktop information assessment.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "	
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,166 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in the range of 25-29km/h.	This section has a mean operating speed in the range of 30-34km/h.

	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Weymouth Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Bowater Place** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.4. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bowater Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Buller Crescent (Manurewa)

The speed limit on Buller Crescent, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Buller Crescent connects to Bowater Place to the north and south. This road provides access to residential properties and is approximately 0.5 km in length.</p> <p>Buller Crescent is classified as an Access road under the one network road classification (ONRC). Buller Crescent is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Buller Crescent were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Buller Crescent has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bowater Place:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Buller Crescent** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Buller Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Carn Place (Weymouth)

The speed limit on Carn Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Carn Place connects to Glenveagh Park Drive to the west. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Carn Place is classified as an access road under the one network road classification (ONRC). Carn Place is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Carn Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Carn Place has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Glenveagh Park Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Carn Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Carn Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Castlefinn Drive (Weymouth)

The speed limit on Castlefinn Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Castlefinn Drive connects to Weymouth Road to the North and Mahia Road to the south. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Castlefinn Drive is classified as an Access road under the one network road classification (ONRC). Castlefinn Drive is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Castlefinn Drive were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 364 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Castlefinn Drive has a mean operating speed of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> <li><b>Weymouth Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Castlefinn Drive** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Castlefinn Drive, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Celmisia Place (Weymouth)

The speed limit on Celmisia Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Celmisia Place connects to Sykes Road to the west. This road provides access to residential properties and is approximately 0.10 km in length.</p> <p>Celmisia Place is classified as an access road under the one network road classification (ONRC). Celmisia Place is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Celmisia Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Celmisia Place has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sykes Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Celmisia Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.5. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Celmisia Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Christmas Road (Manurewa)

The speed limit on Christmas Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Christmas Road connects to Rogers Road to the north and Mahia Road to the south. This road provides access to residential properties and is approximately 0.7 km in length.</p> <p>Christmas Road is classified as Primary Collector road under the one network road classification (ONRC). Christmas Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one serious, one minor and four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Christmas Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and wide shoulder (1.0 to 2.0m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4064 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Christmas Road has a mean operating speed in the range of 40-44 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Rogers Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Mahia Road:</b> 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Christmas Road** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Christmas Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Churchill Avenue (Manurewa)**

The speed limit on Churchill Avenue, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Churchill Avenue connects to Weymouth Road to the North and Puriri Road to the South. This road provides access to residential properties and is approximately 0.63 km in length.</p> <p>Churchill Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Churchill Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one minor and eight non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Churchill Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,003 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Churchill Avenue has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Weymouth Road:</b> 50 km/h</li> <li>• <b>Puriri Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Churchill Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.8. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Churchill Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Claymore Street (Manurewa)

The speed limit on Claymore Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Claymore Street connects to William Avenue to the North and Friedlanders Road to the west. This road provides access to residential properties and is approximately 0.48 km in length.</p> <p>Claymore Street is classified as an Access road under the one network road classification (ONRC). Claymore Street Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Claymore Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Claymore Street has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>William Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Claymore Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Claymore Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Coles Place (Manurewa)**

The speed limit on Coles Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coles Place connects to Kirton Crescent to the East and William Avenue to the West. This road provides access to residential properties and is approximately 0.14 km in length.</p> <p>Coles Place is classified as an Access road under the one network road classification (ONRC). Coles Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Coles Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 925 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Coles Place has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Kirton Crescent:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Williams Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Coles Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Coles Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Coxhead Road (Manurewa)

The speed limit on Coxhead Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coxhead Road connects to Weymouth Road to the North and Mahia Road to the South. This road provides access to residential properties and is approximately 1.69 km in length.</p> <p>Coxhead Road is classified as a Primary Collector road under the one network road classification (ONRC). Coxhead Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 21 crash between 2016 and 2020: four minor and 17 non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Coxhead Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8,119 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Coxhead Road has a mean operating speed in the range of 45-49km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> <li><b>Weymouth Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Coxhead Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

The speed management guide suggests 40 km/h as the safe and appropriate speed for Coxhead Road.

Therefore, we have determined 40km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Derryveagh Lane (Weymouth)

The speed limit on Derryveagh Lane, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Derryveagh Lane connects to Glenveagh Park Drive to the west. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Derryveagh Lane is classified as an Access road under the one network road classification (ONRC). Derryveagh Lane is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Derryveagh Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Derryveagh Lane has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Glenveagh Park Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Derryveagh Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Derryveagh Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dr Pickering Avenue (Manurewa)

The speed limit on Dr Pickering Avenue, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dr Pickering Avenue connects to Friedlanders Road to the East. This road provides access to residential properties and is approximately 0.48 km in length.</p> <p>Dr Pickering Avenue is classified as an access road under the one network road classification (ONRC). Dr Pickering Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor and three non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dr Pickering Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,273 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Dr Pickering Avenue has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Dr Pickering Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.8. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dr Pickering Avenue, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Eddowes Street (Manurewa)

The speed limit on Eddowes Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Eddowes Street connects to Friedlanders Road to the East. This road provides access to residential properties and is approximately 0.44 km in length.</p> <p>Eddowes Street is classified as an Access road under the one network road classification (ONRC). Eddowes Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Eddowes Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Eddowes Street has a mean operating speed in the range of 20-24km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Eddowes Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Eddowes Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Friedlanders Road (Manurewa)

The speed limit on Friedlanders Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Friedlanders Road connects to Weymouth Road to the North and Mahia Road to the South. This road provides access to residential properties and is approximately 1.1km in length.</p> <p>Friedlanders Road is classified as a Primary Access road under the one network road classification (ONRC). Woodside Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are also cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 16 crash between 2016 and 2020: one serious, four minor and 11 non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Friedlanders Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very Wide shoulder (&gt;1.0 to 2.0m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4,596 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Friedlanders Road has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> <li><b>Weymouth Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Friedlanders Road** has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Friedlanders Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Glenveagh Park Drive (Weymouth)**

The speed limit on Glenveagh Park Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glenveagh Park Drive connects to Weymouth Road to the North and Mahia Road to the South. This road provides access to residential properties and is approximately 0.67 km in length.</p> <p>Glenveagh Park Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Glenveagh Park Drive is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glenveagh Park Drive were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,317 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Glenveagh Park Drive has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> <li>• <b>Weymouth Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Glenveagh Park Drive** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Glenveagh Park Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Grebe Street (Manurewa)

The speed limit on Grebe Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Grebe Street connects to Boon Street to the West. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Grebe Street is classified as an access road under the one network road classification (ONRC). Woodside Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Grebe Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Grebe Street has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Boon Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Grebe Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Grebe Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hollinbrigg Place (Manurewa)

The speed limit on Hollinbrigg Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hollinbrigg Place Road connects to Rogers Road to the South. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Hollinbrigg Place is classified as an Access road under the one network road classification (ONRC). Hollinbrigg Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hollinbrigg Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Hollinbrigg Place has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Rogers Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Hollinbrigg Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hollinbrigg Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hutt Road (Manurewa)

The speed limit on Hutt Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hutt Road connects to Churchill Avenue to the East and Bowater Place to the West. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Hutt Road is classified as an access road under the one network road classification (ONRC). Hutt Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hutt Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Hutt Road has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bowater Place:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Churchill Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Hutt Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hutt Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Kevale Place (Manurewa)**

The speed limit on Kevale Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kevale Place connects to Great South Road to the East. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Kevale Place is classified as an Access road under the one network road classification (ONRC). Kevale Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kevale Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Kevale Place has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Great South Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Kevale Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kevale Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kirton Crescent (Manurewa)

The speed limit on Kirton Crescent, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kirton Crescent connects to William Avenue to the West and Weymouth Road to the North. This road provides access to residential properties and is approximately 0.51 km in length.</p> <p>Kirton Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Kirton Crescent is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kirton Crescent were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,632 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Kirton Crescent Place has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Weymouth Road:</b> 50 km/h</li> <li><b>William Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Kirton Crescent** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.6. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kirton Crescent, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Kita Road (Manurewa)**

The speed limit on Kita Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kita Road connects to Buller Crescent to the East and Coxhead Road to the West. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Kita Road is classified as an Access road under the one network road classification (ONRC). Kita Road Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kita Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Kita Road has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Buller Crescent:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Coxhead Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Kita Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kita Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kohiwi Road (Manurewa)

The speed limit on Kohiwi Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kohiwi Road connects to Tawa Crescent to the East and Coxhead Road to the West. This road provides access to residential properties and is approximately 0.29 km in length.</p> <p>Kohiwi Road is classified as a Secondary Collector road under the one network road classification (ONRC). Kohiwi Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kohiwi Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Kohiwi Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Coxhead Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tawa Crescent:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Kohiwi Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kohiwi Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Loughinisland Place (Weymouth)

The speed limit on Loughinisland Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Loughinisland Place connects to Glenveagh Park Drive to the East. This road provides access to residential properties and is approximately 0.2 km in length.</p> <p>Loughinisland Place is classified as an Access road under the one network road classification (ONRC). Loughinisland Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Loughinisland Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Loughinisland Place has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Glenveagh Park Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Loughinisland Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Loughinisland Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McDivitt Street (Manurewa)

The speed limit on McDivitt Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McDivitt Street connects to Dr Pickering Avenue to the North and Mahia Road to the South. This road provides access to residential properties and is approximately 0.42 km in length.</p> <p>McDivitt Street is classified as a Secondary Collector road under the one network road classification (ONRC). McDivitt Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McDivitt Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,155 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>McDivitt Street has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Dr Pickering Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Mahia Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **McDivitt Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.8. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McDivitt Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Morrin Street (Manurewa)**

The speed limit on Morrin Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Morrin Street connects to Coxhead Road to the East and Kirton Crescent to the West. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Morrin Street is classified as a Secondary Collector road under the one network road classification (ONRC). Morrin Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Morrin Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 863 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Morrin Street has a mean operating speed in the range of 20-24 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Coxhead Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Kirton Crescent:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Morrin Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Morrin Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mountfort Street (Manurewa)

The speed limit on Mountfort Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mountfort Street connects to Thompson Terrace to the East and Claymore Street Crescent to the West. This road provides access to residential properties and is approximately 0.26 km in length.</p> <p>Mountfort Street is classified as an Access road under the one network road classification (ONRC). Mountfort Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mountfort Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 915 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Mountfort Street has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Claymore Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Thompson Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Mountfort Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mountfort Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Nield Road (Manurewa)**

The speed limit on Nield Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nield Road connects to Mahia Road to the South. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Nield Road is classified as an Access road under the one network road classification (ONRC). Nield Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nield Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Nield Road has a mean operating speed in the range of 20-24km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Nield Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nield Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nield Road (Manurewa)

The speed limit on Nield Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nield Road connects to Mahia Road to the South. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Nield Road is classified as an Access road under the one network road classification (ONRC). Nield Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nield Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Nield Road has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Nield Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nield Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – O’Connell Street (Manurewa)**

The speed limit on O’Connell Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>O’Connell Street connects to Mountfort Street to the North and Thompson Terrace to the East. This road provides access to residential properties and is approximately 0.36 km in length.</p> <p>O’Connell Street is classified as an Access road under the one network road classification (ONRC). O’Connell Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA’s Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for O’Connell Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> ”
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 821 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	O'Connell Street has a mean operating speed in the range of 25-29 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mountfort Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Thompson Crescent:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **O'Connell Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for O'Connell Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Olive Street (Manurewa)

The speed limit on Olive Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Olive Street connects to Christmas Road to the East. This road provides access to residential properties and is approximately 0.1 km in length.</p> <p>Olive Street is classified as an Access road under the one network road classification (ONRC). Olive Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Olive Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Olive Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Christmas Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Olive Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Olive Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Percival Street (Manurewa)

The speed limit on Percival Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Percival Street connects to Bowater Place to the East. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Percival Street is classified as an Access road under the one network road classification (ONRC). Percival Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Percival Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Percival Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Bowater Place:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Percival Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Percival Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Puriri Road (Manurewa)

Puriri Road, Manurewa, is divided into two sections as follows: <sup>1</sup>

- Section 1: Puriri Road between Christmas Road and Churchill Avenue
- Section 2: Puriri Road between Churchill Avenue and Kohiwi Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Puriri Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Puriri Road connects to Christmas Road to the east and provides access to residential properties.	
	This section is approximately 0.25 km in length.	This section is approximately 0.58 km in length.
	This section is classified as a Secondary collector road under the one network road classification (ONRC).	This section is classified as an Access road under the one network road classification (ONRC).
	Puriri Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: three minor and two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). These were minor and non-injury crashes.	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	This data includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bowater Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."	
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,730 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h.	

MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Christmas Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Puriri Road** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Puriri Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Rhine Place (Weymouth)**

The speed limit on Rhine Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rhine Place connects to Bernina Place to the South. This road provides access to residential properties and is approximately 0.07 km in length.</p> <p>Rhine Place is classified as an Access road under the one network road classification (ONRC). Rhine Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rhine Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Rhine Place has a mean operating speed in the range of 20-24km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bernina Place:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Rhine Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rhine Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rimu Road (Manurewa)

The speed limit on Rimu Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rimu Road connects to Puriri Road to the North and Mahia Road to the South. This road provides access to residential properties and is approximately 0.53 km in length.</p> <p>Rimu Road is classified as a Secondary Collector road under the one network road classification (ONRC). Rimu Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crash between 2016 and 2020: one serious and three non-injury. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rimu Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,185 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Hutt Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> <li><b>Puriri Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Rimu Road** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.
- High risk road<sup>1</sup>

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Rimu Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rogers Road (Manurewa)

The speed limit on Rogers Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rogers Road connects to Weymouth Road to the North. This road provides access to residential properties and is approximately 0.77 km in length.</p> <p>Rogers Road is classified as a Primary Collector road under the one network road classification (ONRC). Rogers Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 11 crash between 2016 and 2020: two minor and nine non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rogers Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and Wide shoulder (1.0 to 2.0m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.”</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4,214 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Rogers Road has a mean operating speed in the range of 35-39km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Weymouth Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Rogers Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Rogers Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ruby Street (Manurewa)

The speed limit on Ruby Street, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ruby Street connects to Friedlanders Road to the East and Eddowes Street to the West. This road provides access to residential properties and is approximately 0.1 km in length.</p> <p>Ruby Street is classified as an Access road under the one network road classification (ONRC). Ruby Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ruby Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Ruby Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Eddowes Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Ruby Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ruby Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Senecio Place (Weymouth)

The speed limit on Senecio Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Senecio Place connects to Sykes Road to the West. This road provides access to residential properties and is approximately 0.08 km in length.</p> <p>Senecio Place is classified as an access road under the one network road classification (ONRC). Senecio Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Senecio Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Senecio Place has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sykes Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Senecio Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Senecio Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Solo Place (Manurewa)

The speed limit on Solo Place, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Solo Place connects to Thompson Terrace to the East. This road provides access to residential properties and is approximately 0.15 km in length.</p> <p>Solo Place is classified as an access road under the one network road classification (ONRC). Solo Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This was a minor crash. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Solo Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Solo Place has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Thompson Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Solo Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Solo Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Southview Place (Wattle Downs)

The speed limit on Southview Place, Wattle Downs has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Southview Place connects to Mahia Road to the South. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Southview Place is classified as an Access road under the one network road classification (ONRC). Southview Place is a two-lane, undivided road. There are pedestrian amenities with no on-street parking. There are also no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Southview Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Southview Place has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Southview Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Southview Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sykes Road (Weymouth)

Sykes Road, Weymouth, is divided into two sections as follows:<sup>1</sup>

- Section 1: Sykes Road between Weymouth Road and 440m south of Weymouth Road
- Section 2: Sykes Road between 440m south of Weymouth Road and Mahia Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Sykes Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Sykes Road connects to Weymouth Road to the north and Mahia Road to the south and provides access to residential properties.	
	This section is approximately 0.44 km in length.	This section is approximately 0.56 km in length.
	This section is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is classified as a Primary Collector road under the one network road classification (ONRC).
	Puriri Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: two minor and four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(e) the characteristics of the road and roadsides; and	The following characteristics for Sykes Road were determined using desktop information assessment.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very wide shoulder (&lt;2.0m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.”	
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to 3 intersections per km</li> <li>• <b>Access density:</b> 5 to 10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,212 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3,020 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed in the range of 30-34km/h.	

	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> <li>• <b>Weymouth Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Skyles Road** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 1.6. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Sykes Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Tawa Crescent (Manurewa)**

The speed limit on Tawa Crescent, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tawa Crescent connects to Mahia Road to the South. This road provides access to residential properties and is approximately 0.75 km in length.</p> <p>Tawa Crescent is classified as an access road under the one network road classification (ONRC). Tawa Crescent is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: two minor and eight non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tawa Crescent were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to 5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 823 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Tawa Crescent has a mean operating speed in the range of 25-29km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mahia Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Tawa Crescent** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tawa Crescent, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Thompson Terrace (Manurewa)

The speed limit on Thompson Terrace, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Thompson Terrace connects to Mahia Road to the South and Morrin Street to the North. This road provides access to residential properties and is approximately 0.92 km in length.</p> <p>Thompson Terrace is classified as an access road under the one network road classification (ONRC). Thompson Terrace Place is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Thompson Terrace were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 735 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Thompson Terrace has a mean operating speed in the range of 25-29 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mahia Road:</b> 50 km/h</li> <li><b>Morrin Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Thompson Terrace** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.9. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Thompson Terrace, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Toro Lane (Manurewa)

The speed limit on Toro Lane, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Toro Lane connects to Rogers Road to the West. This road provides access to residential properties and is approximately 0.10 km in length.</p> <p>Toro Lane is classified as an Access road under the one network road classification (ONRC). Toro Lane is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Toro Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Toro Lane has a estimated mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Rogers Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Toro Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.5. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Toro Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Totara Road (Manurewa)

The speed limit on Totara Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Totara Road connects to Puriri Road to the North and Rimu Road to the East. This road provides access to residential properties and is approximately 0.41 km in length.</p> <p>Totara Road is classified as an access road under the one network road classification (ONRC). Totara Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one serious crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Totara Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazard:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Totara Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Puriri Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Rimu Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, Totara Road has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Totara Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tui Crescent (Manurewa)

The speed limit on Tui Crescent, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tui Crescent connects to Bowater Place to the East. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>Tui Crescent is classified as an access road under the one network road classification (ONRC). Tui Crescent is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tui Crescent were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Tui Crescent has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bowater Place:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Tui Crescent** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tui Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – William Avenue (Manurewa)

The speed limit on William Avenue, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>William Avenue connects to Friedlanders Road to the West. This road provides access to residential properties and is approximately 0.32 km in length.</p> <p>William Avenue is classified as an access road under the one network road classification (ONRC). William Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for William Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 925 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>William Avenue has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Friedlanders Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **William Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for William Avenue, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Woodside Road (Manurewa)

The speed limit on Woodside Road, Manurewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodside Road connects to Great South Road to the East. This road provides access to residential properties and is approximately 0.09 km in length.</p> <p>Woodside Road is classified as an access road under the one network road classification (ONRC). Woodside Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking. There are no cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodside Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Woodside Road has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Great South Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From the desktop information assessment, **Woodside Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Woodside Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Zurich Place (Weymouth)

The speed limit on Zurich Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Zurich Place connects to Bernina Place to the North. This road provides access to residential properties and is approximately 0.1 km in length.</p> <p>Zurich Place is classified as an Access road under the one network road classification (ONRC). Zurich Place is a two-lane, undivided road. There are pedestrian amenities with no on-street parking or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Zurich Place were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 30/09/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Zurich Place has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bernina Place:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Zurich Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Zurich Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Abbotsford Terrace (Devonport)

The speed limit on Abbotsford Terrace, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Abbotsford Terrace connects to Victoria Road to the east and Lytton Street to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Abbotsford Terrace is classified as an Access road under the one network road classification (ONRC). Abbotsford Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Abbotsford Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Abbotsford Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Victoria Road between Albert Road and northern end of Victoria Road: 50 km/h (proposed 30 km/h)</li> <li>Lytton Street: 50 km/h (proposed 30 km/h)</li> <li>Cowper Street: 50 km/h (proposed 30 km/h)</li> <li>Bulwer Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Abbotsford Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Abbotsford Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Adams Road South (Pukekohe)

The speed limit on Adams Road South, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Adams Road South connects to Belmont Road to the south. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Adams Road South is classified as an Access road under the one network road classification (ONRC). Adams Road South is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Adams Road South were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Adams Road South has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Belmont Road: 50km/h (proposed 30km/h)</li> <li>Tawhiti Road: 50km/h (proposed 30km/h)</li> <li>Hempopo Street: 50km/h (proposed 30km/h)</li> <li>Huamanu Street: 50km/h (proposed 30km/h)</li> <li>Rural View Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Adams Road South has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 60km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 60km/h as the safe and appropriate speed for Adams Road South, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Adel Place (Weymouth)

The speed limit on Adel Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Adel Place connects to Weymouth Road to the west. This road provides access to residential properties and is approximately 0.15km in length.  Adel Place is classified as an Access road under the one network road classification (ONRC). Adel Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Adel Place were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 160 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Adel Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Adel Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Adel Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Admirals Court Drive (Greenhithe)

The speed limit on Admirals Court Drive, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Admirals Court Drive connects to Kyle Road to the east. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Admirals Court Drive is classified as an Access road under the one network road classification (ONRC). Admirals Court Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Admirals Court Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Admirals Court Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> <li>Cutter Place: 50km/h (proposed 30km/h)</li> <li>Steamer Place: 50km/h (proposed 30km/h)</li> <li>Pitoitoi Avenue: 50km/h (proposed 30km/h)</li> <li>Moko Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Admirals Court Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Admirals Court Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Advene Road (Cockle Bay)**

The speed limit on Advene Road, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Advene Road connects to Alexander Street to the west and John Gill Road to the east. This road provides access to residential properties and is approximately 0.58 km in length.</p> <p>Advene Road is classified as a secondary collector road under the one network road classification (ONRC). Advene Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2288 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Advene Road has a mean operating speed in the range of 30-34 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Alexander Street: 50 km/h (proposed 30 km/h)</li> <li>• Judkins Crescent: 50 km/h (proposed 30 km/h)</li> <li>• Redcoat Place: 50 km/h (proposed 30 km/h)</li> <li>• John Gill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Advene Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.58 For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Advene Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Agapanthus Place (Flat Bush)

The speed limit on Agapanthus Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Agapanthus Place connects to Kestev Drive to the north and Erica Road to the west. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Agapanthus Place is classified as an Access road under the one network road classification (ONRC). Agapanthus Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Agapanthus Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Agapanthus Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kestev Drive: 50km/h (proposed 30km/h)</li> <li>Erica Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Agapanthus Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Agapanthus Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ainwick Road (Flat Bush)

The speed limit on Ainwick Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ainwick Road connects to Bronwylian Drive to the north and Cyril French Drive to the south. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Ainwick Road is classified as an Access road under the one network road classification (ONRC). Ainwick Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ainwick Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ainwick Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bronwylan Drive: 50km/h (proposed 30km/h)</li> <li>• Cyril French Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ainwick Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ainwick Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Akiraho Street (Mount Eden)

The speed limit on Akiraho Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Akiraho Street connects to Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Akiraho Street is classified as a Secondary Collector road under the one network road classification (ONRC). Akiraho Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Akiraho Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1352 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Akiraho Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Akiraho Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Akiraho Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alamein Avenue (Belmont)

The speed limit on Alamein Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alamein Avenue connects to Lake Road to the west and Montgomery Avenue to the south. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Alamein Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Alamein Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alamein Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 696 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Alamein Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lake Road: 50km/h (no proposed change)</li> <li>Montgomery Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Alamein Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alamein Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alan Ave (Henderson)

The speed limit on Alan Ave, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alan Ave connects to Larnoch Road to the north. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Alan Ave is classified as an Access road under the one network road classification (ONRC). Alan Ave is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alan Ave were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 211 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Alan Ave has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Larnoch Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Alan Ave has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alan Ave, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Albert Road (Kelston)

The speed limit on Albert Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albert Road connects to Archibald Road to the east. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Albert Road is classified as an Access road under the one network road classification (ONRC). Albert Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albert Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Albert Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Archibald Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Albert Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Albert Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Albert Street (Leigh)

The speed limit on Albert Street, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albert Street connects to Seatoun Avenue to the east. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Albert Street is classified as an Access road under the one network road classification (ONRC). Albert Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albert Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Albert Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Seatoun Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Albert Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Albert Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Albert Street (Otahuhu)

The speed limit on Albert Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albert Street connects to Princes Street to the north and Avenue Road to the south. This road provides access to residential properties and is approximately 0.55km in length.</p> <p>Albert Street is classified as a Secondary Collector road under the one network road classification (ONRC). Albert Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one minor crash, eight non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albert Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2705 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Albert Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Princes Street: 50km/h (no proposed change)</li> <li>Avenue Road between Atkinson Avenue and the eastern end of Atkinson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Albert Street has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Albert Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alberta Street (Point Chevalier)

The speed limit on Alberta Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Alberta Street connects to Point Chevalier to the east. This road provides access to residential properties and is approximately 0.43km in length.  Alberta Street is classified as an Access road under the one network road classification (ONRC). Alberta Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Alberta Street were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 2 to &lt;3 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Alberta Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Alberta Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.58. For urban areas this corresponds to an IRR band of **Low**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alberta Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Albion Road (Otahuhu)

The speed limit on Albion Road, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albion Road connects to Great South Road to the west and Atkinson Avenue to the east. This road provides access to residential properties and is approximately 0.3km in length.</p> <p>Albion Road is classified as a Primary collector road under the one network road classification (ONRC). Albion Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albion Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as commercial big box/industrial using MegaMaps tool. The IRR defines Urban Residential as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be"

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Albion Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Great South Road: 50km/h (no proposed change)</li> <li>Atkinson Avenue: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Albion Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.96. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Albion Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alderley Road (Mount Eden)

The speed limit on Alderley Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alderley Road connects to View Road to the north and Bellevue Road to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Alderley Road is classified as a Access road under the one network road classification (ONRC). Alderley Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alderley Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 416 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Alderley Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>View Road: 50km/h (proposed 30km/h)</li> <li>Bellevue Road: 50km/h (proposed 30km/h)</li> <li>Lisnoe Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Alderley Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alderley Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alexander Street (Otahuhu)

The speed limit on Alexander Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alexander Street connects to Tamaki Avenue to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Alexander Street is classified as an Access road under the one network road classification (ONRC). Alexander Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alexander Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Alexander Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tamaki Avenue: 50km/h (proposed 30km/h)</li> <li>• Great southRoad: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Alexander Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alexander Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alexander Street (Cockle Bay)

The speed limit on Alexander Street, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alexander Street connects to Churchill Road to the north and Trelawn Place to the south. This road provides access to residential properties and is approximately 0.74 km in length.</p> <p>Alexander Street is classified as a secondary collector road under the one network road classification (ONRC). Alexander Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor and three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 401 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Alexander Street has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Churchill Road: 50 km/h</li> <li>Avoca Road: 50 km/h (proposed 30 km/h)</li> <li>Advane Road: 50 km/h (proposed 30 km/h)</li> <li>Trelawn Place: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Alexander Street has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**
- o The Infrastructure Risk Rating Score is 1.91 For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Alexander Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Allegro Way (Oteha)

The speed limit on Allegro Way, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Allegro Way connects to Lagonda Rise to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Allegro Way is classified as an Access road under the one network road classification (ONRC). Allegro Way is a two-way, Two lane undivided road. There are no pedestrian amenities, on-street parking and cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Allegro Way were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 2 to &lt;3 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Allegro Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Lagonda Rise: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Allegro Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Allegro Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alston Avenue (Kelston)

The speed limit on Alston Avenue, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alston Avenue connects to Kelwyn Road to the west. This road provides access to residential properties and is approximately 1.10km in length.</p> <p>Alston Avenue is classified as an Access road under the one network road classification (ONRC). Alston Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alston Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 358 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Alston Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kelwyn Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Alston Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alston Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ambury Road (Mangere Bridge)

The speed limit on Ambury Road, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ambury Road connects to Muir Avenue to the north and Kiwi Esplanade to the west. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Ambury Road is classified as an Access road under the one network road classification (ONRC). Ambury Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ambury Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1136 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ambury Road has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Muir Avenue: 50km/h (proposed 30km/h)</li> <li>• Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>• Warden Place: 50km/h (proposed 30km/h)</li> <li>• Ashcroft Avenue: 50km/h (proposed 30km/h)</li> <li>• Waterlea Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ambury Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ambury Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Amon Avenue (Flat Bush)

The speed limit on Amon Avenue, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Amon Avenue connects to Coachman Drive to the east and Middlefield Drive to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Amon Avenue is classified as an Access road under the one network road classification (ONRC). Amon Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Amon Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Amon Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Coachman Drive: 50km/h (proposed 30km/h)</li> <li>Middlefield Drive: 50km/h (proposed 30km/h)</li> <li>Stonebrook Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Amon Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Amon Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Anarahi Place (Mangere Bridge)

The speed limit on Anarahi Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Anarahi Place connects to Waterlea Avenue to the north. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Anarahi Place is classified as an Access road under the one network road classification (ONRC). Anarahi Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Anarahi Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 561 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Anarahi Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Waterlea Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Anarahi Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Anarahi Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Andersons Road (Oteha)

The speed limit on Andersons Road, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Andersons Road connects to John Jennings Drive to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Andersons Road is classified as an Access Road under the one network road classification (ONRC). Andersons Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Andersons Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 270 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Andersons Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>John Jennings Drive: 50km/h (proposed 30km/h)</li> <li>Ravine Lane: 50km/h (proposed 30km/h)</li> <li>Canyon Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Andersons Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Andersons Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Andes Avenue (Mangere Bridge)

The speed limit on Andes Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Andes Avenue connects to Kiwi Esplanade to the north and Muir Avenue to the east. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Andes Avenue is classified as an Access road under the one network road classification (ONRC). Andes Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Andes Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Andes Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>• Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Andes Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Andes Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Angus Street (Otaru)

The speed limit on Angus Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Angus Street connects to Tyrone street to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Angus Street is classified as an Access road under the one network road classification (ONRC). Angus Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Angus Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Angus Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tyrone Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Angus Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Angus Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Annalise Place (Orewa)

The speed limit on Annalise Place, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Annalise Place connects to Forest Glen to the south and Hibiscus Coast Highway to the east. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Annalise Place is classified as an Access road under the one network road classification (ONRC). Annalise Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Annalise Place were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 40 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Annalise Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Forest Glen: 50km/h (proposed 30km/h)</li> <li>• Hibiscus Coast Highway: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Annalise Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Annalise Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ansty Place (Mangere)

The speed limit on Ansty Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ansty Place connects to Windrush Road to the east. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Ansty Place is classified as an Access road under the one network road classification (ONRC). Ansty Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ansty Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 670 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ansty Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Windrush Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ansty Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.00. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ansty Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Antrim Crescent (Otarā)

The speed limit on Antrim Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Antrim Crescent connects to Tyrone Street to the south. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Antrim Crescent is classified as an Access road under the one network road classification (ONRC). Antrim Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Antrim Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Antrim Crescent has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tyrone Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Antrim Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Antrim Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Antych Place (Otaru)

The speed limit on Antych Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Antych Place connects to Waimate Street to the west. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Antych Place is classified as an Access road under the one network road classification (ONRC). Antych Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Antych Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 738 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Antych Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimate Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Antych Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Antych Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Apa Street (Weymouth)**

The speed limit on Apa Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Apa Street connects to Kuurae Crescent to the east and Ipukarea Street to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Apa Street is classified as an Access road under the one network road classification (ONRC). Apa Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Apa Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Apa Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kuurae Crescent: 50km/h (proposed 30km/h)</li> <li>• Ipukarea Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Apa Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Apa Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Archibald Road (Kelston)

The speed limit on Archibald Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Archibald Road connects to Brains Road to the north and Great North Road to the south. This road provides access to residential properties and is approximately 0.84km in length.</p> <p>Archibald Road is classified as a Primary Collector road under the one network road classification (ONRC). Archibald Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: two minor crashes, seven non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Archibald Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4045 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Archibald Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Brains Road: 50km/h (proposed 30km/h)</li> <li>Great North Road: 50km/h (no proposed change)</li> <li>St Leonards Road: 50km/h (proposed 30km/h)</li> <li>Beaubank Road: 50km/h (proposed 30km/h)</li> <li>Albert Road: 50km/h (proposed 30km/h)</li> <li>Netherlands Avenue: 50km/h (proposed 30km/h)</li> <li>Kelman Road: 50km/h (proposed 30km/h)</li> <li>Scanlen Terrace: 50km/h (proposed 30km/h)</li> <li>Archlynn Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Archibald Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Archibald Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Archibald Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Archlynn Road (Kelston)**

The speed limit on Archlynn Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Archlynn Road connects to Kelwyn Road to the east and St Leonards Road to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Archlynn Road is classified as a Primary Collector road under the one network road classification (ONRC). Archlynn Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Archlynn Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6931 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Archlynn Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kelwyn Road: 50km/h (proposed 30km/h)</li> <li>• St Leonards Road: 50km/h (proposed 30km/h)</li> <li>• Archibald Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Archlynn Road has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.78. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Archlynn Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Archlynn Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Aries Place (Shelly Park)

The speed limit on Aries Place, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aries Place connects to John Gill Road to the east. This road provides access to residential properties and is approximately 0.11 km in length.</p> <p>Aries Place is classified as an access road under the one network road classification (ONRC). Aries Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Aries Place has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>John Gill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Aries Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.74 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Aries Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Armada Drive (Ranui)

The speed limit on Armada Drive, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Armada Drive connects to Luanda Drive to the north and Swanson Road to the south. This road provides access to residential properties and is approximately 0.52km in length.</p> <p>Armada Drive is classified as a Primary Collector road under the one network road classification (ONRC). Armada Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one serious crash, one minor crash, one non-injury crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Armada Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2134 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Armada Drive has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Luanda Drive between waitemata Drive roundabout and Swanson Road: 50km/h (proposed 30km/h)</li> <li>• Swanson Road: 50km/h (no proposed change)</li> <li>• Edwin Freeman Place: 50km/h (proposed 30km/h)</li> <li>• Childers Road: 50km/h (proposed 30km/h)</li> <li>• Dunbarton Drive: 50km/h (proposed 30km/h)</li> <li>• Kilmarnock Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Armada Drive has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Armada Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Armada Drive is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Armagh Road (Blockhouse Bay)

The speed limit on Armagh Road, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Armagh Road connects to Kinross Street to the north and Gilfillan Street to the east. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Armagh Road is classified as an Access road under the one network road classification (ONRC). Armagh Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Armagh Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 802 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Armagh Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kinross Street: 50km/h (no proposed change)</li> <li>Gilfillan Street: 50km/h (proposed 30km/h)</li> <li>Endeavour Street: 50km/h (proposed 30km/h)</li> <li>Connaught Street: 50km/h (proposed 30km/h)</li> <li>Connell Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Armagh Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Armagh Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Arodella Crescent (Ranui)

The speed limit on Arodella Crescent, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Arodella Crescent connects to Luanda Drive to the south. This road provides access to residential properties and is approximately 0.55km in length.</p> <p>Arodella Crescent is classified as an Access road under the one network road classification (ONRC). Arodella Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Arodella Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 345 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Arodella Crescent has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Luanda Drive between waitemata Drive roundabout and Swanson Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Arodella Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Arodella Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Aronui Terrace (Kelston)

The speed limit on Aronui Terrace, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aronui Terrace connects to Tamariki Avenue to the south. This road provides access to residential properties and is approximately 0.47km in length.</p> <p>Aronui Terrace is classified as an Access road under the one network road classification (ONRC). Aronui Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one fatal crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Aronui Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 743 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Aronui Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tamariki Avenue : 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Aronui Terrace has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Aronui Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Aruhe Street (Stonefields)

The speed limit on Aruhe Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aruhe Street connects to Stonefields Avenue to the north and Kauriki Terrace to the south. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Aruhe Street is classified as an Access road under the one network road classification (ONRC). Aruhe Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Aruhe Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Aruhe Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Stonefields Avenue: 50km/h (proposed 30km/h)</li> <li>• Kauriki Terrace: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Aruhe Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Aruhe Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ascot Avenue (Henderson)

The speed limit on Ascot Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ascot Avenue connects to Harrington Road to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Ascot Avenue is classified as an Access road under the one network road classification (ONRC). Ascot Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor crash, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ascot Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 191 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ascot Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Harrington Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ascot Avenue has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ascot Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashby Place (Pukekohe)

The speed limit on Ashby Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashby Place connects to Cooper Street to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Ashby Place is classified as an Access road under the one network road classification (ONRC). Ashby Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashby Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 540 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ashby Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cooper Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ashby Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ashby Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashcroft Avenue (Mangere Bridge)

The speed limit on Ashcroft Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashcroft Avenue connects to Muir Avenue to the north and Ambury Road to the south. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Ashcroft Avenue is classified as an Access road under the one network road classification (ONRC). Ashcroft Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashcroft Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 561 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ashcroft Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> <li>Ambury Road: 50km/h (proposed 30km/h)</li> <li>Waterlea Avenue: 50km/h (proposed 30km/h)</li> <li>Feltwell Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ashcroft Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ashcroft Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashgrove Road (Mangere)

The speed limit on Ashgrove Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashgrove Road connects to Bader Road to the north. This road provides access to residential properties and is approximately 0.67km in length.</p> <p>Ashgrove Road is classified as a Primary Collector road under the one network road classification (ONRC). Ashgrove Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one minor crash, six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashgrove Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3065 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ashgrove Road has a mean operating speed in the range of 34-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bader Road: 50km/h (no proposed change)</li> <li>• Friesian Drive: 50km/h (proposed 30km/h)</li> <li>• Ilford Crescent: 50km/h (proposed 30km/h)</li> <li>• Purley Place: 50km/h (proposed 30km/h)</li> <li>• Chingford Close: 50km/h (proposed 30km/h)</li> <li>• Rush Place: 50km/h (proposed 30km/h)</li> <li>• Humphreys Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ashgrove Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ashgrove Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Ashgrove Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashton Road (Mount Eden)

The speed limit on Ashton Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashton Road connects to Valley Road to the north and Grange Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Ashton Road is classified as a Access road under the one network road classification (ONRC). Ashton Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashton Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4571 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ashton Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Valley Road: 50km/h (proposed 30km/h)</li> <li>Grange Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ashton Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Ashton Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ashurst Lane (Greenhithe)

The speed limit on Ashurst Lane, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ashurst Lane connects to Greenbough Lane to the west and Greenbough Lane to the east. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Ashurst Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Ashurst Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ashurst Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ashurst Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Greenbough Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ashurst Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ashurst Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Athelstan Place (Otarā)

The speed limit on Athelstan Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Athelstan Place connects to Wroughton Crescent to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Athelstan Place is classified as an Access road under the one network road classification (ONRC). Athelstan Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Athelstan Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 234 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Athelstan Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Wroughton Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Athelstan Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Athelstan Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Aurea Avenue (Pakuranga)

The speed limit on Aurea Avenue, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aurea Avenue connects to Mattson Road to the east. This road provides access to residential properties and is approximately 0.36 km in length.</p> <p>Aurea Avenue is classified as a secondary collector road under the one network road classification (ONRC). Aurea Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor and one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2069 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Aurea Avenue has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jan Place: 50 km/h (proposed 30 km/h)</li> <li>Mattson Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Aurea Avenue has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**
- o The Infrastructure Risk Rating Score is 2.21 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Aurea Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Avenham Walk (Mount Eden)**

The speed limit on Avenham Walk, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Avenham Walk connects to Valley Road to the north. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Avenham Walk is classified as a Access road under the one network road classification (ONRC). Avenham Walk is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Avenham Walk were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Avenham Walk has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Valley Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Avenham Walk has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Avenham Walk, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Avenue Road (Otahuhu)

The speed limit on Avenue Road, Otahuhu, between Atkinson Avenue and the eastern end of Avenue Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Avenue Road connects to Todd Place to the east and Atkinson Avenue to the west. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Avenue Road is classified as a Primary Collector road under the one network road classification (ONRC). Avenue Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty one crashes between 2016 and 2020: two minor crashes, nineteen non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Avenue Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as " <i>characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5060 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Avenue Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Todd Place: 50km/h (proposed 30km/h)</li> <li>• Atkinson Avenue: 50km/h (no proposed change)</li> <li>• Albert Street: 50km/h (proposed 30km/h)</li> <li>• Hutton Street between Princes Street and Fairburn Road: 50km/h (proposed 30km/h)</li> <li>• Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>• Water Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Avenue Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.16. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 30km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 30km/h as the safe and appropriate speed for Avenue Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Avenue Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Avoca Road (Cockle Bay)

The speed limit on Avoca Road, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Avoca Road connects to Litten Road to the west and Alexander Street to the east. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Avoca Road is classified as a secondary collector road under the one network road classification (ONRC). Avoca Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1674 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Avoca Road has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Litten Road: 50 km/h</li> <li>Alexander Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Avoca Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.33 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Avoca Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Avon Lane (Parnell)

The speed limit on Avon Lane, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Avon Lane connects to Tauraru Terrace to the east and Gladstone Road to the west. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Avon Lane is classified as an Access road under the one network road classification (ONRC). Avon Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Avon Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Avon Lane has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Taurarua Terrace: 50km/h (proposed 30km/h)</li> <li>• Gladstone Road: 50km/h (no proposed change)</li> <li>• Avon Street: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Avon Lane has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Avon Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Awatea Road (Parnell)

The speed limit on Awatea Road, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Awatea Road connects to Papahia Street to the east and Saint Stephens Avenue to the west. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Awatea Road is classified as a Secondary Collector road under the one network road classification (ONRC). Awatea Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Awatea Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 247 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Awatea Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Papahia Street: 50km/h (proposed 30km/h)</li> <li>Saint Stephens Avenue between Gladstone Road and the northern end of Saint Stephens Avenue: 50km/h (proposed 30km/h)</li> <li>Glanville Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Awatea Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Awatea Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Awhenga Place (Weymouth)

The speed limit on Awhenga Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Awhenga Place connects to Becker Drive to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Awhenga Place is classified as an Access road under the one network road classification (ONRC). Awhenga Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Awhenga Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Awhenga Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Awhenga Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Awhenga Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ayrton Street (Te Atatu South)

The speed limit on Ayrton Street, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ayrton Street connects to Roberts Road to the north and Bedford Street to the south. This road provides access to residential properties and is approximately 0.20 km in length.</p> <p>Ayrton Street is classified as an access road under the one network road classification (ONRC). Ayrton Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 233 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ayrton Street has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roberts Road: 50 km/h (proposed 30 km/h)</li> <li>Bedford Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ayrton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Ayrton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Baber Drive (Stonefields)

The speed limit on Baber Drive, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Baber Drive connects to Emilia Nixon Lane to the south and Tihi Street to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Baber Drive is classified as an Access road under the one network road classification (ONRC). Baber Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Baber Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Baber Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Emilia Nixon Lane: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Baber Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Baber Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bagley Street (Hillsborough)

The speed limit on Bagley Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bagley Street connects to Hoskins Avenue to the east. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Bagley Street is classified as an access road under the one network road classification (ONRC). Bagley Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bagley Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hoskins Avenue: 50km/h (proposed 30km/h)</li> <li>Filgate Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bagley Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bagley Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Balnoon Place (Mangere East)

The speed limit on Balnoon Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Balnoon Place connects to Chalfont Street to the west. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Balnoon Place is classified as an Access road under the one network road classification (ONRC). Balnoon Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Balnoon Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 659 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Balnoon Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Chalfont Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Balnoon Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Balnoon Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Balwyn Place (Clendon Park)

The speed limit on Balwyn Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Balwyn Place connects to Burundi Avenue to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Balwyn Place is classified as an Access road under the one network road classification (ONRC). Balwyn Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Balwyn Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Balwyn Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Burundi Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Balwyn Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Balwyn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bamboo Grove (Kelston)

The speed limit on Bamboo Grove, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bamboo Grove connects to St Leonards Road to the north. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Bamboo Grove is classified as an Access road under the one network road classification (ONRC). Bamboo Grove is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bamboo Grove were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 189 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bamboo Grove has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• St Leonards Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bamboo Grove has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bamboo Grove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bambury Close (Point Chevalier)

The speed limit on Bambury Close, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bambury Close connects to Shaftesbury Avenue to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Bambury Close is classified as an Access road under the one network road classification (ONRC). Bambury Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bambury Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bambury Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Shaftesbury Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bambury Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bambury Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Banbury Place (Mangere Bridge)

The speed limit on Banbury Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Banbury Place connects to Kiwi Esplanade to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Banbury Place is classified as an Access road under the one network road classification (ONRC). Banbury Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Banbury Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Banbury Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kiwi Esplanade: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Banbury Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Banbury Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bangor Street (Point Chevalier)

The speed limit on Bangor Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bangor Street connects to Johnstone Street to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Bangor Street is classified as an Access road under the one network road classification (ONRC). Bangor Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bangor Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bangor Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Boscawen Street: 50 km/h (proposed 30 km/h)</li> <li>Johnstone Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bangor Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bangor Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barbarich Drive (Stonefields)

The speed limit on Barbarich Drive, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barbarich Drive connects to Tephra Boulevard to the south and Searle Street to the east. This road provides access to residential properties and is approximately 0.97km in length.</p> <p>Barbarich Drive is classified as an Access road under the one network road classification (ONRC). Barbarich Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barbarich Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 172 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Barbarich Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tephra Boulevard: 50km/h (proposed 30km/h)</li> <li>• Emilia Nixon Lane: 50km/h (proposed 30km/h)</li> <li>• Robert Sale Rise: 50km/h (proposed 30km/h)</li> <li>• Burden Lane: 50km/h (proposed 30km/h)</li> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Styak Street: 50km/h (proposed 30km/h)</li> <li>• Singleton Avenue: 50km/h (proposed 30km/h)</li> <li>• Searle Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Barbarich Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barbarich Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barbary Avenue (Kelston)

The speed limit on Barbary Avenue, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barbary Avenue connects to St Leonards Road to the north and Kelman Road to the south. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Barbary Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Barbary Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barbary Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 674 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Barbary Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>St Leonards Road: 50km/h (proposed 30km/h)</li> <li>Kelman Road: 50km/h (proposed 30km/h)</li> <li>Kiernan Place: 50km/h (proposed 30km/h)</li> <li>Daphne Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Barbary Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barbary Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barcroft Place (Clendon Park)

The speed limit on Barcroft Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barcroft Place connects to Bill Phillip Place to the south. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Barcroft Place is classified as an Access road under the one network road classification (ONRC). Barcroft Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barcroft Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Barcroft Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bill Phillip Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Barcroft Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barcroft Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barnard Place (Manurewa East)

The speed limit on Barnard Place, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barnard Place connects to Ferguson Street to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Barnard Place is classified as an Access road under the one network road classification (ONRC). Barnard Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barnard Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Barnard Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ferguson Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Barnard Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barnard Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barneys Farm Road (Clendon Park)

The speed limit on Barneys Farm Road, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barneys Farm Road connects to Maplesden Drive to the north and Palmers Road to the south. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Barneys Farm Road is classified as a Secondary Collector road under the one network road classification (ONRC). Barneys Farm Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barneys Farm Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1528 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Barneys Farm Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Maplesden Drive: 50km/h (proposed 30km/h)</li> <li>• Palmers Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Barneys Farm Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barneys Farm Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barr Place (Weymouth)

The speed limit on Barr Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barr Place connects to Settlers Cove to the south. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Barr Place is classified as an Access road under the one network road classification (ONRC). Barr Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barr Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Barr Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Barr Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barr Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barrier View Road (Leigh)

The speed limit on Barrier View Road, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barrier View Road connects to Cotterell Street to the north and Wonderview Road to the west. This road provides access to residential properties and is approximately 0.55km in length.</p> <p>Barrier View Road is classified as an Access road under the one network road classification (ONRC). Barrier View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barrier View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Barrier View Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Cotterell Street: 50km/h (proposed 30km/h)</li> <li>• Wonderview Road: 50km/h (proposed 30km/h)</li> <li>• Kyle Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Barrier View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barrier View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barton Street East (Blockhouse Bay)

The speed limit on Barton Street East, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barton Street East connects to Endeavour Street to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Barton Street East is classified as an Access road under the one network road classification (ONRC). Barton Street East is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barton Street East were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 75 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Barton Street East has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Endeavour Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Barton Street East has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barton Street East, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Barton Street (Blockhouse Bay)

The speed limit on Barton Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Barton Street connects to Connell Street to the west and Mitchell Street to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Barton Street is classified as an Access road under the one network road classification (ONRC). Barton Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Barton Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Barton Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Connell Street: 50km/h (proposed 30km/h)</li> <li>• Mitchell Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Barton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Barton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bass Road (Albany)

The speed limit on Bass Road, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bass Road connects to Albany Highway to the north and Sample Road to the south. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Bass Road is classified as a Secondary Collector road under the one network road classification (ONRC). Bass Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bass Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3533 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bass Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Albany Highway: 50km/h (no proposed change)</li> <li>Sample Road: 50km/h (proposed 30km/h)</li> <li>Kinleith Way: 50km/h (proposed 30km/h)</li> <li>Vinewood Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bass Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bass Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Baverstock Road (Flat Bush)

The speed limit on Baverstock Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Baverstock Road connects to Chapel Road to the west and Stancombe Road to the south. This road provides access to residential properties and is approximately 1.17km in length.</p> <p>Baverstock Road is classified as a Secondary Collector road under the one network road classification (ONRC). Baverstock Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records fourteen crashes between 2016 and 2020: three minor crashes, eleven non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Baverstock Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3643 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Baverstock Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Chapel Road: 60km/h (no proposed change)</li> <li>• Stancombe Road: 60km/h (no proposed change)</li> <li>• Bronwylian Drive: 50km/h (proposed 30km/h)</li> <li>• Stornaway Drive: 50km/h (proposed 30km/h)</li> <li>• Erica Road: 50km/h (proposed 30km/h)</li> <li>• Middlefield Drive: 50km/h (proposed 30km/h)</li> <li>• Maypark Crescent: 50km/h (proposed 30km/h)</li> <li>• Kensway Drive: 50km/h (proposed 30km/h)</li> <li>• Monique Place: 50km/h (proposed 30km/h)</li> <li>• Oakville Avenue: 50km/h (proposed 30km/h)</li> <li>• Danielle Place: 50km/h (proposed 30km/h)</li> <li>• Woodberry Drive: 50km/h (proposed 30km/h)</li> <li>• Shelby Lane: 50km/h (proposed 30km/h)</li> <li>• Citron Court: 50km/h (proposed 30km/h)</li> <li>• Coachman Drive: 50km/h (proposed 30km/h)</li> <li>• Silverwood Drive: 50km/h (proposed 30km/h)</li> <li>• Villarosa Lane: 50km/h (proposed 30km/h)</li> <li>• Plantation Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Baverstock Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Baverstock Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beach Road (Weymouth)

The speed limit on Beach Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beach Road connects to McLeod Road to the north and McInnes Road to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Beach Road is classified as an Access road under the one network road classification (ONRC). Beach Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beach Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Beach Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>McLeod Road: 50km/h (proposed 30km/h)</li> <li>McInnes Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Beach Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Beach Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beaubank Road (Kelston)

The speed limit on Beaubank Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beaubank Road connects to Archibald Road to the west and Kelwyn Road to the south. This road provides access to residential properties and is approximately 1.10km in length.</p> <p>Beaubank Road is classified as an Access road under the one network road classification (ONRC). Beaubank Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beaubank Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 358 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Beaubank Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Archibald Road: 50km/h (proposed 30km/h)</li> <li>• Kelwyn Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Beaubank Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Beaubank Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Becker Drive (Weymouth)

The speed limit on Becker Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Becker Drive connects to Awhenga Place to the east and Weymouth Road to the west. This road provides access to residential properties and is approximately 0.58km in length.</p> <p>Becker Drive is classified as an Access road under the one network road classification (ONRC). Becker Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Becker Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Becker Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Awhenga Place: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Hinton Place: 50km/h (proposed 30km/h)</li> <li>Joshua Place: 50km/h (proposed 30km/h)</li> <li>Kohi Kai Place: 50km/h (proposed 30km/h)</li> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Becker Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Becker Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Bedford Street (Te Atatu South)**

The speed limit on Bedford Street, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bedford Street connects to Ayrton Street to the north. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>Bedford Street is classified as an access road under the one network road classification (ONRC). Bedford Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 233 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bedford Street has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Ayrton Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bedford Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bedford Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bedlow Place (Mangere East)

The speed limit on Bedlow Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bedlow Place connects to Chalfont Street to the south. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Bedlow Place is classified as an Access road under the one network road classification (ONRC). Bedlow Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bedlow Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 659 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bedlow Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Chalfont Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bedlow Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bedlow Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beihlers Road (Weymouth)

The speed limit on Beihlers Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beihlers Road connects to Weymouth Road to the west. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Beihlers Road is classified as an Access road under the one network road classification (ONRC). Beihlers Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beihlers Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 738 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Beihlers Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Beihlers Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Beihlers Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Belfast Street (Hillsborough)

The speed limit on Belfast Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Belfast Street connects to Frederick Street to the south. This road provides access to residential properties and is approximately 0.67km in length.</p> <p>Belfast Street is classified as a Secondary Collector road under the one network road classification (ONRC). Belfast Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one minor and five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Belfast Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Frederick Street: 50km/h (proposed 30km/h)</li> <li>Farnol Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Belfast Street has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Belfast Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bellevue Road (Mount Eden)

The speed limit on Bellevue Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bellevue Road connects to Dominion Road to the west and Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.92km in length.</p> <p>Bellevue Road is classified as a Secondary Collector road under the one network road classification (ONRC). Bellevue Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: three minor and four non-injury crashes. This resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bellevue Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bellevue Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dominion Road: 50km/h (no proposed change)</li> <li>• Carrick Place: 50km/h (proposed 30km/h)</li> <li>• Alderley Road: 50km/h (proposed 30km/h)</li> <li>• Leamington Road: 50km/h (proposed 30km/h)</li> <li>• Horoeke Avenue: 50km/h (proposed 30km/h)</li> <li>• Sherbourne Road: 50km/h (proposed 30km/h)</li> <li>• Esplanade Road: 50km/h (proposed 30km/h)</li> <li>• Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bellevue Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bellevue Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bellville Drive (Clendon Park)

The speed limit on Bellville Drive, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bellville Drive connects to Finlayson Avenue to the east and Eloise Place to the west. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Bellville Drive is classified as an Access road under the one network road classification (ONRC). Bellville Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bellville Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bellville Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> <li>• Eloise Place: 50km/h (proposed 30km/h)</li> <li>• Bill Phillip Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bellville Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bellville Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Belmont Road (Pukekohe)

The speed limit on Belmont Road, Pukekohe, between Jutland Road and 140 metres southwest of Adams Road South, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Belmont Road connects to Russell Road to the west and Jutland Road to the east. This road provides access to residential properties and is approximately 0.69km in length.</p> <p>Belmont Road is classified as a Secondary Collector road under the one network road classification (ONRC). Belmont Road is a two-way, Unsealed road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Belmont Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 23 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Belmont Road has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Russell Road: 60km/h (no proposed change)</li> <li>Jutland Road: 50km/h (proposed 30km/h)</li> <li>Matikao Place: 50km/h (proposed 30km/h)</li> <li>Te Manaki Street: 50km/h (proposed 30km/h)</li> <li>Adams Road South: 50km/h (proposed 30km/h)</li> <li>Factory Road: 50km/h (proposed 30km/h)</li> <li>Taepu Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Belmont Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.43. For urban areas this corresponds to an IRR band of **High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 60km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 60km/h as the safe and appropriate speed for Belmont Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bernard Street (Mt Wellington)

The speed limit on Bernard Street, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bernard Street connects to Jolson Road to the north and Panama Road to the south. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Bernard Street is classified as a Secondary Collector road under the one network road classification (ONRC). Bernard Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bernard Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1560 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bernard Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Jolson Road: 50km/h (proposed 30km/h)</li> <li>• Panama Road: 50km/h (proposed 30km/h)</li> <li>• Kealy Road: 50km/h (proposed 30km/h)</li> <li>• Paringa Lane: 50km/h (proposed 30km/h)</li> <li>• Rerehua Lane: 50km/h (proposed 30km/h)</li> <li>• Peace Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bernard Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.84. For urban areas this corresponds to an IRR band of **High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bernard Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Berrett Place (Otaru)

The speed limit on Berrett Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Berrett Place connects to Hills Road to the west. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Berrett Place is classified as an Access road under the one network road classification (ONRC). Berrett Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Berrett Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Berrett Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hills Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Berrett Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Berrett Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Berridge Avenue (Point Chevalier)

The speed limit on Berridge Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Berridge Avenue connects to Smale Street to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Berridge Avenue is classified as an Access road under the one network road classification (ONRC). Berridge Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Berridge Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 78 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Berridge Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Smale Street: 50 km/h (proposed 30 km/h)</li> <li>Miller Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Berridge Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Berridge Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bezar Place (Flat Bush)

The speed limit on Bezar Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bezar Place connects to Janway Avenue to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Bezar Place is classified as an Access road under the one network road classification (ONRC). Bezar Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bezar Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bezar Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Janway Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bezar Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bezar Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bill Phillip Place (Clendon Park)

The speed limit on Bill Phillip Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bill Phillip Place connects to Barcroft Place to the north and Bellville Drive to the east. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Bill Phillip Place is classified as an Access road under the one network road classification (ONRC). Bill Phillip Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bill Phillip Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bill Phillip Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Barcroft Place: 50km/h (proposed 30km/h)</li> <li>• Bellville Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bill Phillip Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bill Phillip Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Birch Place (Otara)

The speed limit on Birch Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Birch Place connects to Kudu Road to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Birch Place is classified as an Access road under the one network road classification (ONRC). Birch Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Birch Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 925 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Birch Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kudu Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Birch Place has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Birch Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blackgate Place (Weymouth)

The speed limit on Blackgate Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blackgate Place connects to Taitimu Drive to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Blackgate Place is classified as an Access road under the one network road classification (ONRC). Blackgate Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blackgate Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 958 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Blackgate Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Blackgate Place has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blackgate Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blake Road (Mangere East)

The speed limit on Blake Road, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blake Road connects to Tennessee Avenue to the south and Vine Street to the south. This road provides access to residential properties and is approximately 0.88km in length.</p> <p>Blake Road is classified as an Access road under the one network road classification (ONRC). Blake Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: two minor crashes, five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blake Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1075 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Blake Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tennessee Avenue: 50km/h (proposed 30km/h)</li> <li>Vine Street: 50km/h (proposed 30km/h)</li> <li>Sutton Avenue: 50km/h (proposed 30km/h)</li> <li>Macky Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Blake Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blake Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blampied Road (Otara)

The speed limit on Blampied Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blampied Road connects to Hamill Road to the west and Dairy Road to the south. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Blampied Road is classified as an Access road under the one network road classification (ONRC). Blampied Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blampied Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 655 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Blampied Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dairy Road: 50km/h (proposed 30km/h)</li> <li>• Leonard Place: 50km/h (proposed 30km/h)</li> <li>• Stainton Place: 50km/h (proposed 30km/h)</li> <li>• Hamill Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Blampied Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blampied Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blanes Road (Weymouth)

The speed limit on Blanes Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blanes Road connects to Lucas Place to the east and Gibbons Road to the west. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Blanes Road is classified as a Secondary Collector road under the one network road classification (ONRC). Blanes Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: two minor crashes, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blanes Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1164 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Blanes Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lucas Place: 50km/h (proposed 30km/h)</li> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Evans Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Blanes Road has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blanes Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blockhouse Bay Road (Blockhouse Bay)

The speed limit on Blockhouse Bay Road, Blockhouse Bay, between Donovan Street and the southern end of Blockhouse Bay Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Blockhouse Bay Road connects to Kinross Street to the north. This road provides access to residential properties and is approximately 0.68km in length.  Blockhouse Bay Road is classified as an Arterial road under the one network road classification (ONRC). Blockhouse Bay Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one minor crash, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Blockhouse Bay Road were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 13495 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Blockhouse Bay Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kinross Street: 50km/h (no proposed change)</li> <li>• Donovan Street: 50km/h (no proposed change)</li> <li>• Gilfillan Street: 50km/h (proposed 30km/h)</li> <li>• Gill Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Blockhouse Bay Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 2.63. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40/50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40/50km/h as the safe and appropriate speed for Blockhouse Bay Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Blockhouse Bay Road is an Arterial Road, that is not the intended function of this section of Blockhouse Bay Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bluegrey Avenue (Stonefields)

The speed limit on Bluegrey Avenue, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bluegrey Avenue connects to Tephra Boulevard to the south and College Road to the north. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Bluegrey Avenue is classified as a Primary collector road under the one network road classification (ONRC). Bluegrey Avenue is a two-way, Divided - traverseable road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bluegrey Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Divided - traverseable</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2996 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bluegrey Avenue has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• College Road: 50km/h (no proposed change)</li> <li>• Tephra Boulevard: 50km/h (proposed 30km/h)</li> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bluegrey Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 1.72. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Bluegrey Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bluff Terrace (Hillsborough)

The speed limit on Bluff Terrace, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bluff Terrace connects to Frederick Street to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Bluff Terrace is classified as an access road under the one network road classification (ONRC). Bluff Terrace is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bluff Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Frederick Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bluff Terrace has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bluff Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Bodi Place (Te Atatu South)**

The speed limit on Bodi Place, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bodi Place connects to McLeod Road to the south. This road provides access to residential properties and is approximately 0.29 km in length.</p> <p>Bodi Place is classified as a secondary collector road under the one network road classification (ONRC). Bodi Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 592 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bodi Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>McLeod Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bodi Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.08 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bodi Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bodmin Place (Mangere East)

The speed limit on Bodmin Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bodmin Place connects to Chalfont Street to the west. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Bodmin Place is classified as an Access road under the one network road classification (ONRC). Bodmin Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bodmin Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 659 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bodmin Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Chalfont Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bodmin Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bodmin Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Bolina Crescent (Pakuranga)**

The speed limit on Bolina Crescent, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bolina Crescent connects to Tiraumea Drive to the south. This road provides access to residential properties and is approximately 0.09 km in length.</p> <p>Bolina Crescent is classified as an access road under the one network road classification (ONRC). Bolina Crescent is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bolina Crescent has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bolina Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.69 For urban areas this corresponds to an IRR band of **Medium High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bolina Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bolton Place (Otara)

The speed limit on Bolton Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bolton Place connects to Grant Avenue to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Bolton Place is classified as an Access road under the one network road classification (ONRC). Bolton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bolton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 447 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bolton Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Grant Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bolton Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bolton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bonaparte Drive (Pukekohe)

The speed limit on Bonaparte Drive, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bonaparte Drive connects to Wellington Street to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Bonaparte Drive is classified as an Access road under the one network road classification (ONRC). Bonaparte Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bonaparte Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bonaparte Drive has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Wellington Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bonaparte Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bonaparte Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bond Street (Otarā)

The speed limit on Bond Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bond Street connects to Ferguson Road to the east and Cobham Crescent to the west. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Bond Street is classified as a Secondary Collector road under the one network road classification (ONRC). Bond Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bond Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2719 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bond Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ferguson Road: 50km/h (proposed 30km/h)</li> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> <li>Tindall Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bond Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bond Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Booker Place (Weymouth)

The speed limit on Booker Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Booker Place connects to Gibbons Road to the north. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Booker Place is classified as an Access road under the one network road classification (ONRC). Booker Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Booker Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Booker Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Booker Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Booker Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Boscawen Street (Point Chevalier)

The speed limit on Boscawen Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Boscawen Street connects to Point Chevalier Road to the west and Bangor Street to the east. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Boscawen Street is classified as an Access road under the one network road classification (ONRC). Boscawen Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Boscawen Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Boscawen Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Bangor Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Boscawen Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Boscawen Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bourne Street (Mount Eden)

The speed limit on Bourne Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bourne Street connects to Lovelock Avenue to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Bourne Street is classified as a Access road under the one network road classification (ONRC). Bourne Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bourne Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bourne Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Lovelock Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bourne Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bourne Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bowen Street (Manurewa East)

The speed limit on Bowen Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bowen Street connects to McDougall Street to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Bowen Street is classified as an Access road under the one network road classification (ONRC). Bowen Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bowen Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 343 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bowen Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• McDougall Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bowen Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bowen Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bowmore Close (Flat Bush)

The speed limit on Bowmore Close, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bowmore Close connects to Cyril French Drive to the south and Pennygale Close to the south. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Bowmore Close is classified as an Access road under the one network road classification (ONRC). Bowmore Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bowmore Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bowmore Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> <li>Pennygale Close: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bowmore Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bowmore Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Boyd Avenue (Mangere Bridge)

The speed limit on Boyd Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Boyd Avenue connects to Kiwi Esplanade to the east and Wallace Road to the west. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Boyd Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Boyd Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Boyd Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Boyd Avenue has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>• Wallace Road: 50km/h (proposed 30km/h)</li> <li>• Sullivan Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Boyd Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Boyd Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brains Road (Kelston)

The speed limit on Brains Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brains Road connects to Cobham Crescent to the north and Archibald Road to the east. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Brains Road is classified as a Primary Collector road under the one network road classification (ONRC). Brains Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brains Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3814 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Brains Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> <li>Archibald Road: 50km/h (proposed 30km/h)</li> <li>Martin Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Brains Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Brains Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Brains Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brava Place (Clendon Park)

The speed limit on Brava Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brava Place connects to Finlayson Avenue to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Brava Place is classified as an Access road under the one network road classification (ONRC). Brava Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brava Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Brava Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Brava Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Brava Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brentwood Avenue (Mount Eden)

The speed limit on Brentwood Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brentwood Avenue connects to Dominion Road to the west and Wynyard Road to the east. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Brentwood Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Brentwood Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brentwood Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 539 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Brentwood Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Horopito Street: 50km/h (proposed 30km/h)</li> <li>Wrights Spur: 50km/h (proposed 30km/h)</li> <li>Wynyard Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Brentwood Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Brentwood Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brian Slater Way (Stonefields)

The speed limit on Brian Slater Way, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brian Slater Way connects to Searle Street to the north and Stonemason Avenue to the south. This road provides access to residential properties and is approximately 0.28km in length.</p> <p>Brian Slater Way is classified as a Secondary Collector road under the one network road classification (ONRC). Brian Slater Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brian Slater Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1352 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Brian Slater Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Searle Street: 50km/h (proposed 30km/h)</li> <li>Garin Way: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Brian Slater Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.84. For urban areas this corresponds to an IRR band of **High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Brian Slater Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bridgefield Crescent (Flat Bush)

The speed limit on Bridgefield Crescent, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bridgefield Crescent connects to Coachman Drive to the north and Oakville Avenue to the west. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Bridgefield Crescent is classified as an Access road under the one network road classification (ONRC). Bridgefield Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bridgefield Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bridgefield Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Coachman Drive: 50km/h (proposed 30km/h)</li> <li>• Oakville Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bridgefield Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bridgefield Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bridgewater Road (Parnell)

The speed limit on Bridgewater Road, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bridgewater Road connects to Saint Stephens Avenue to the east and Judges Bay Road to the west. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Bridgewater Road is classified as an Access road under the one network road classification (ONRC). Bridgewater Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bridgewater Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bridgewater Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Saint Stephens Avenue between Gladstone Road and the northern end of Saint Stephens Avenue: 50km/h (proposed 30km/h)</li> <li>Judges Bay Road: 50km/h (proposed 30km/h)</li> <li>Rota Place: 50km/h (proposed 30km/h)</li> <li>Crescent Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bridgewater Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bridgewater Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Briody Terrace (Stonefields)

The speed limit on Briody Terrace, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Briody Terrace connects to Stonemason Avenue to the north and Tihi Street to the south. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Briody Terrace is classified as an Access road under the one network road classification (ONRC). Briody Terrace is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Briody Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Briody Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Styak Street: 50km/h (proposed 30km/h)</li> <li>• Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Briody Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Briody Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bronwylian Drive (Flat Bush)

The speed limit on Bronwylian Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bronwylian Drive connects to Cyril French Drive to the east and Baverstock Road to the south. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Bronwylian Drive is classified as an Access road under the one network road classification (ONRC). Bronwylian Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bronwylian Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bronwylian Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> <li>Tornish Drive: 50km/h (proposed 30km/h)</li> <li>Middlefield Drive: 50km/h (proposed 30km/h)</li> <li>Ainwick Road: 50km/h (proposed 30km/h)</li> <li>Fernloche Place: 50km/h (proposed 30km/h)</li> <li>Finty Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bronwylian Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bronwylian Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brook Haven Rise (Clendon Park)

The speed limit on Brook Haven Rise, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brook Haven Rise connects to Pitt Avenue to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Brook Haven Rise is classified as an Access road under the one network road classification (ONRC). Brook Haven Rise is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brook Haven Rise were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Brook Haven Rise has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Pitt Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Brook Haven Rise has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Brook Haven Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Browning Street (Manurewa East)

The speed limit on Browning Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Browning Street connects to Ellen Street to the north and Mcannalley Street to the south. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Browning Street is classified as a Secondary Collector road under the one network road classification (ONRC). Browning Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Browning Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 998 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Browning Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ellen Street: 50km/h (proposed 30km/h)</li> <li>Mcannalley Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Browning Street has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Browning Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bulwer Street (Devonport)

The speed limit on Bulwer Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bulwer Street connects to Abbotsford Terrace to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Bulwer Street is classified as an Access road under the one network road classification (ONRC). Bulwer Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bulwer Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bulwer Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Abbotsford Terrace: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bulwer Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bulwer Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bundena Place (Clendon Park)

The speed limit on Bundena Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bundena Place connects to Finlayson Avenue to the west. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Bundena Place is classified as an Access road under the one network road classification (ONRC). Bundena Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bundena Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bundena Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bundena Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bundena Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bungalow Avenue (Point Chevalier)

The speed limit on Bungalow Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bungalow Avenue connects to Johnstone Street to the north and Oliver Street to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Bungalow Avenue is classified as an Access road under the one network road classification (ONRC). Bungalow Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bungalow Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bungalow Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Johnstone Street: 50 km/h (proposed 30 km/h)</li> <li>• Oliver Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Bungalow Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bungalow Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Burden Lane (Stonefields)

The speed limit on Burden Lane, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Burden Lane connects to Barbarich Drive to the west and Searle Street to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Burden Lane is classified as an Access road under the one network road classification (ONRC). Burden Lane is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Burden Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 172 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Burden Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>Searle Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Burden Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Burden Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Burundi Avenue (Clendon Park)

The speed limit on Burundi Avenue, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Burundi Avenue connects to Roscommon Road to the east and Rukumoana Place to the west. This road provides access to residential properties and is approximately 0.78km in length.</p> <p>Burundi Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Burundi Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one serious crash, five minor crashes, three non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Burundi Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4014 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Burundi Avenue has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Roscommon Road: 60km/h (no proposed change)</li> <li>• Rukumoana Place: 50km/h (proposed 30km/h)</li> <li>• Balwin Place: 50km/h (proposed 30km/h)</li> <li>• Templeton Place: 50km/h (proposed 30km/h)</li> <li>• Maplesden Drive: 50km/h (proposed 30km/h)</li> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> <li>• Frobisher Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Burundi Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Burundi Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Burundi Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bushpark Place (Flat Bush)

The speed limit on Bushpark Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bushpark Place connects to Kestev Drive to the west. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Bushpark Place is classified as an Access road under the one network road classification (ONRC). Bushpark Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bushpark Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bushpark Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kestev Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Bushpark Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bushpark Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Buxton Street (Point Chevalier)

The speed limit on Buxton Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Buxton Street connects to Walford Road to the east and Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Buxton Street is classified as a Secondary Collector road under the one network road classification (ONRC). Buxton Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Buxton Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Buxton Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Walford Street: 50 km/h (proposed 30 km/h)</li> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Buxton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Buxton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Civil Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Capstick Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Civil Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Civil Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Claresholm Place (Mangere Bridge)

The speed limit on Claresholm Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Claresholm Place connects to Kiwi Esplanade to the north. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Claresholm Place is classified as an Access road under the one network road classification (ONRC). Claresholm Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Claresholm Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Claresholm Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kiwi Esplanade: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Claresholm Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Claresholm Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Clarkson Crescent (Otarā)

The speed limit on Clarkson Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Clarkson Crescent connects to Johnstones Road to the north. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Clarkson Crescent is classified as an Access road under the one network road classification (ONRC). Clarkson Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Clarkson Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 166 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Clarkson Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tate Place: 50km/h (proposed 30km/h)</li> <li>• Johnstones Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Clarkson Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Clarkson Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Clayton Avenue (Otara)

The speed limit on Clayton Avenue, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Clayton Avenue connects to Bairds Road to the east and Everitt Road to the south. This road provides access to residential properties and is approximately 1.02km in length.</p> <p>Clayton Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Clayton Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: seven minor crashes, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Clayton Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2256 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Clayton Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> <li>Everitt Road: 50km/h (proposed 30km/h)</li> <li>Terry Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Clayton Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.43. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Clayton Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cleek Road (Mangere East)

The speed limit on Cleek Road, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cleek Road connects to Vine Street to the north and Tennessee Avenue to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Cleek Road is classified as an Access road under the one network road classification (ONRC). Cleek Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cleek Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 426 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cleek Road has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Vine Street: 50km/h (proposed 30km/h)</li> <li>• Tennessee Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cleek Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cleek Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Clement Street (Otahuhu)

The speed limit on Clement Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Clement Street connects to Ronaki Road to the west. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Clement Street is classified as an Access road under the one network road classification (ONRC). Clement Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Clement Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Clement Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ronaki Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Clement Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Clement Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Clipper Place (Shelly Park)**

The speed limit on Clipper Place, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Clipper Place connects to John Gill Road to the west. This road provides access to residential properties and is approximately 0.21 km in length.</p> <p>Clipper Place is classified as an access road under the one network road classification (ONRC). Clipper Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 561 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Clipper Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>John Gill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Clipper Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.41 For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Clipper Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cloud Way (Karaka)

The speed limit on Cloud Way, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cloud Way connects to Ockhams Street to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Cloud Way is classified as an Access road under the one network road classification (ONRC). Cloud Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cloud Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cloud Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cloud Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cloud Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Clyro Place (Mangere East)

The speed limit on Clyro Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Clyro Place connects to Chelburn Crescent to the west. This road provides access to residential properties and is approximately 0.90km in length.</p> <p>Clyro Place is classified as an Access road under the one network road classification (ONRC). Clyro Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Clyro Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 830 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Clyro Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Chelburn Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Clyro Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Clyro Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Coachman Drive (Flat Bush)

The speed limit on Coachman Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coachman Drive connects to Baverstock Road to the south and Amon Avenue to the west. This road provides access to residential properties and is approximately 0.69km in length.</p> <p>Coachman Drive is classified as an Access road under the one network road classification (ONRC). Coachman Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Coachman Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Coachman Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> <li>Amon Avenue: 50km/h (proposed 30km/h)</li> <li>Citron Court: 50km/h (proposed 30km/h)</li> <li>Bridgefield Crescent: 50km/h (proposed 30km/h)</li> <li>Tsar Court: 50km/h (proposed 30km/h)</li> <li>Oakville Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Coachman Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Coachman Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cobham Crescent (Kelston)

The speed limit on Cobham Crescent, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cobham Crescent connects to Brains Road to the south and Ingleby Place to the east. This road provides access to residential properties and is approximately 1.02km in length.</p> <p>Cobham Crescent is classified as a Primary Collector road under the one network road classification (ONRC). Cobham Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cobham Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Winding</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 796 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cobham Crescent has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Brains Road: 50km/h (proposed 30km/h)</li> <li>• Ingleby Place: 50km/h (proposed 30km/h)</li> <li>• Kiernan Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cobham Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.38. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Cobham Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Cobham Crescent is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cobham Crescent (Otara)

The speed limit on Cobham Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cobham Crescent connects to Bairds Road to the west and Tindall Crescent to the east. This road provides access to residential properties and is approximately 1.00km in length.</p> <p>Cobham Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Cobham Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: two serious crashes, six non-injury crashes. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cobham Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2818 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cobham Crescent has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> <li>Tindall Crescent: 50km/h (proposed 30km/h)</li> <li>Crown Crescent: 50km/h (proposed 30km/h)</li> <li>Bond Street: 50km/h (proposed 30km/h)</li> <li>Vilma Place: 50km/h (proposed 30km/h)</li> <li>Nola Crescent: 50km/h (proposed 30km/h)</li> <li>Wyona Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cobham Crescent has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cobham Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Coles Avenue (Mount Eden)

The speed limit on Coles Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coles Avenue connects to Valley Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Coles Avenue is classified as a Access road under the one network road classification (ONRC). Coles Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Coles Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Coles Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Valley Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Coles Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Coles Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Coniston Avenue (Te Atatu South)**

The speed limit on Coniston Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coniston Avenue connects to Te Atatu Road to the west. This road provides access to residential properties and is approximately 0.40 km in length.</p> <p>Coniston Avenue is classified as a secondary collector road under the one network road classification (ONRC). Coniston Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 530 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Coniston Avenue has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Te Atatu Road: 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Coniston Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 1.83 For urban areas this corresponds to an IRR band of **Low Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Coniston Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Connaught Street (Blockhouse Bay)

The speed limit on Connaught Street, Blockhouse Bay, between Connell Street and Armagh Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Connaught Street connects to Godley Road to the west and Armagh Road to the east. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Connaught Street is classified as a Secondary Collector road under the one network road classification (ONRC). Connaught Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Connaught Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1975 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Connaught Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Armagh Road: 50km/h (proposed 30km/h)</li> <li>Mitchell Street: 50km/h (proposed 30km/h)</li> <li>Connell Street: 50km/h (proposed 30km/h)</li> <li>Portage Road: 50km/h (no proposed change)</li> <li>Godley Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Connaught Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Connaught Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Connell Street (Blockhouse Bay)

The speed limit on Connell Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Connell Street connects to Kinross Street to the north and Taunton Terrace to the south. This road provides access to residential properties and is approximately 0.76km in length.</p> <p>Connell Street is classified as an Access road under the one network road classification (ONRC). Connell Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Connell Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Connell Street has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kinross Street: 50km/h (no proposed change)</li> <li>• Taunton Terrace: 50km/h (proposed 30km/h)</li> <li>• Armagh Road: 50km/h (proposed 30km/h)</li> <li>• Connaught Street: 50km/h (proposed 30km/h)</li> <li>• Barton Street: 50km/h (proposed 30km/h)</li> <li>• Mitchell Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Connell Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Connell Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Conway Road (Mount Eden)

The speed limit on Conway Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Conway Road connects to Woodford Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Conway Road is classified as a Access road under the one network road classification (ONRC). Conway Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Conway Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 400 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Conway Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Woodford Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Conway Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Conway Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cooper Crescent (Otara)

The speed limit on Cooper Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cooper Crescent connects to Everitt Road to the east. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Cooper Crescent is classified as an Access road under the one network road classification (ONRC). Cooper Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one serious crash, two non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cooper Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 416 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cooper Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Everitt Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cooper Crescent has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cooper Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cooper Street (Pukekohe)

The speed limit on Cooper Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cooper Street connects to Ward Street to the north and Queen Street to the east. This road provides access to residential properties and is approximately 0.50km in length.</p> <p>Cooper Street is classified as an Access road under the one network road classification (ONRC). Cooper Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cooper Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 540 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cooper Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ward Street: 50km/h (no proposed change)</li> <li>• Queen Street: 50km/h (no proposed change)</li> <li>• Ashby Place: 50km/h (proposed 30km/h)</li> <li>• Girdhar Place: 50km/h (proposed 30km/h)</li> <li>• Revell Court: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cooper Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cooper Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Copley Street (Kelston)

The speed limit on Copley Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Copley Street connects to Kelwyn Road to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Copley Street is classified as an Access road under the one network road classification (ONRC). Copley Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Copley Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Copley Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kelwyn Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Copley Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Copley Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Cornwall Road (Mangere)**

The speed limit on Cornwall Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cornwall Road connects to Windrush Road to the east and Thomas Road to the west. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Cornwall Road is classified as a Secondary Collector road under the one network road classification (ONRC). Cornwall Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cornwall Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1758 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cornwall Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Windrush Road: 50km/h (proposed 30km/h)</li> <li>• Thomas Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cornwall Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cornwall Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cornwall Street (Te Atatu South)

The speed limit on Cornwall Street, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cornwall Street connects to Roberts Road to the north. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Cornwall Street is classified as an access road under the one network road classification (ONRC). Cornwall Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 126 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cornwall Street has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roberts Road: 50 km/h (proposed 30 km/h)</li> <li>Devon Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cornwall Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Cornwall Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Corran Place (Ranui)

The speed limit on Corran Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Corran Place connects to Dunbarton Drive to the north and Kilmarnock Avenue to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Corran Place is classified as an Access road under the one network road classification (ONRC). Corran Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Corran Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Corran Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dunbarton Drive: 50km/h (proposed 30km/h)</li> <li>• Kilmarnock Avenue: 50km/h (proposed 30km/h)</li> <li>• Drummond Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Corran Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Corran Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cosmo Place (Otara)

The speed limit on Cosmo Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cosmo Place connects to Carey Place to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Cosmo Place is classified as an Access road under the one network road classification (ONRC). Cosmo Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cosmo Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cosmo Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Carey Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cosmo Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cosmo Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cotterell Street (Leigh)

The speed limit on Cotterell Street, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cotterell Street connects to Hill Street to the north and Barrier View Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Cotterell Street is classified as an Access road under the one network road classification (ONRC). Cotterell Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cotterell Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cotterell Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hill Street: 50km/h (proposed 30km/h)</li> <li>• Barrier View Road: 50km/h (proposed 30km/h)</li> <li>• Penguin Street: 50km/h (proposed 30km/h)</li> <li>• Totara Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cotterell Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cotterell Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cottrell Place (Clendon Park)

The speed limit on Cottrell Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cottrell Place connects to Finlayson Avenue to the north. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Cottrell Place is classified as an Access road under the one network road classification (ONRC). Cottrell Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cottrell Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 240 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cottrell Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cottrell Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cottrell Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cowper Street (Devonport)

The speed limit on Cowper Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cowper Street connects to Abbotsford Terrace to the north and Ewen Alison Avenue to the south. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Cowper Street is classified as an Access road under the one network road classification (ONRC). Cowper Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cowper Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 121 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cowper Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Abbotsford Terrace: 50 km/h (proposed 30 km/h)</li> <li>• Ewen Alison Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Mozeley Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cowper Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cowper Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cracroft Street (Otahuhu)

The speed limit on Cracroft Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cracroft Street connects to Tamaki Avenue to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Cracroft Street is classified as an Access road under the one network road classification (ONRC). Cracroft Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cracroft Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cracroft Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tamaki Avenue: 50km/h (proposed 30km/h)</li> <li>Great southRoad: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cracroft Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cracroft Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Craiburn Street (Ranui)

The speed limit on Craiburn Street, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Craiburn Street connects to Waitemata Drive to the east and Glenarden Way to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Craiburn Street is classified as an Access road under the one network road classification (ONRC). Craiburn Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Craiburn Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Craiburn Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waitemata Drive: 50km/h (no proposed change)</li> <li>• Glenarden Way: 50km/h (proposed 30km/h)</li> <li>• Hibernian Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Craiburn Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Craiburn Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crayford Street West (Avondale)

The speed limit on Crayford Street West, Avondale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crayford Street West connects to Layard Street to the east and Great North Road to the west. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Crayford Street West is classified as a Secondary Collector road under the one network road classification (ONRC). Crayford Street West is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crayford Street West were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Crayford Street West has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Layard Street: 50km/h (proposed 30km/h)</li> <li>Great North Road: 50km/h (no proposed change)</li> <li>Geddes Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Crayford Street West has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crayford Street West, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crescent Road (Parnell)

The speed limit on Crescent Road, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crescent Road connects to Bridgewater Road to the east and Glanville Terrace to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Crescent Road is classified as an Access road under the one network road classification (ONRC). Crescent Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crescent Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 338 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Crescent Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bridgewater Road: 50km/h (proposed 30km/h)</li> <li>• Glanville Terrace: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Crescent Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crescent Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crewe Close (Albany)

The speed limit on Crewe Close, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crewe Close connects to Roanoke Way to the west. This road provides access to residential properties and is approximately 0.50km in length.</p> <p>Crewe Close is classified as an Access road under the one network road classification (ONRC). Crewe Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crewe Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow lane (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Crewe Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roanoke Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Crewe Close has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crewe Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crimson Park (Oteha)

The speed limit on Crimson Park, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crimson Park connects to Fernhill Way to the east. This road provides access to residential properties and is approximately 1.93km in length.</p> <p>Crimson Park is classified as an Access road under the one network road classification (ONRC). Crimson Park is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crimson Park were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Crimson Park has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Crimson Park has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crimson Park, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crispian Place (Weymouth)

The speed limit on Crispian Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crispian Place connects to Gibbons Road to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Crispian Place is classified as an Access road under the one network road classification (ONRC). Crispian Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crispian Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Crispian Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Crispian Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crispian Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crown Crescent (Otara)

The speed limit on Crown Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crown Crescent connects to Cobham Crescent to the east. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Crown Crescent is classified as an Access road under the one network road classification (ONRC). Crown Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crown Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Crown Crescent has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Crown Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Crown Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cumberland Street (Leigh)

The speed limit on Cumberland Street, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cumberland Street connects to Kowhai Terrace to the east and Pakiri Road to the west. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Cumberland Street is classified as an Access road under the one network road classification (ONRC). Cumberland Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cumberland Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as “ <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 411 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cumberland Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kowhai Terrace: 50km/h (proposed 30km/h)</li> <li>Pakiri Road between Seatoun Avenue and 240 metres west of Seatoun Avenue: 50km/h (proposed 30km/h)</li> <li>Seatoun Avenue: 50km/h (proposed 30km/h)</li> <li>Puriri Avenue: 50km/h (proposed 30km/h)</li> <li>Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> <li>Hill Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cumberland Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.19. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cumberland Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cuthill Close (Albany)

The speed limit on Cuthill Close, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cuthill Close connects to Mahoney Drive to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Cuthill Close is classified as a Secondary Collector road under the one network road classification (ONRC). Cuthill Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cuthill Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cuthill Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mahoney Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cuthill Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cuthill Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cutter Place (Greenhithe)

The speed limit on Cutter Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cutter Place connects to Admirals Court Drive to the west. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Cutter Place is classified as an Access road under the one network road classification (ONRC). Cutter Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cutter Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cutter Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Admirals Court Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Cutter Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cutter Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Cyclades Place (Shelly Park)**

The speed limit on Cyclades Place, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cyclades Place connects to John Gill Road to the west. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>Cyclades Place is classified as an access road under the one network road classification (ONRC). Cyclades Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cyclades Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>John Gill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cyclades Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Cyclades Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cyril French Drive (Flat Bush)

The speed limit on Cyril French Drive, Flat Bush, between Baverton Road and Bronwylian Drive, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cyril French Drive connects to Chapel Road to the west and Elwyn Close to the south. This road provides access to residential properties and is approximately 0.76km in length.</p> <p>Cyril French Drive is classified as a Access road under the one network road classification (ONRC). Cyril French Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cyril French Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Cyril French Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Chapel Road: 60km/h (no proposed change)</li> <li>Elwyn Close: 50km/h (proposed 30km/h)</li> <li>Camith Close: 50km/h (no proposed change)</li> <li>Duntrune Road: 50km/h (no proposed change)</li> <li>Banshire Close: 50km/h (no proposed change)</li> <li>Dalcross Drive: 50km/h (no proposed change)</li> <li>Earlshall Drive: 50km/h (proposed 30km/h)</li> <li>Middlefield Drive: 50km/h (proposed 30km/h)</li> <li>Maybole Drive: 50km/h (no proposed change)</li> <li>Baverton Drive: 50km/h (no proposed change)</li> <li>Bronwylian Drive: 50km/h (proposed 30km/h)</li> <li>Ainwick Road: 50km/h (proposed 30km/h)</li> <li>Dunoon Close: 50km/h (proposed 30km/h)</li> <li>Bowmore Close: 50km/h (proposed 30km/h)</li> <li>Karson Place: 50km/h (proposed 30km/h)</li> <li>Tornish Drive: 50km/h (proposed 30km/h)</li> <li>Stornaway Drive: 50km/h (proposed 30km/h)</li> <li>Pennygale Close: 50km/h (proposed 30km/h)</li> </ul>

	<ul style="list-style-type: none"> <li>Oswald Close: 50km/h (proposed 30km/h)</li> </ul>
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**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Cyril French Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Cyril French Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dairy Road (Otarā)

The speed limit on Dairy Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dairy Road connects to Hamill Road to the north. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Dairy Road is classified as an Access road under the one network road classification (ONRC). Dairy Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dairy Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 655 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dairy Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hamill Road: 50km/h (proposed 30km/h)</li> <li>• Blampied Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Dairy Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dairy Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dalry Place (Mangere Bridge)

The speed limit on Dalry Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dalry Place connects to Muir Avenue to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Dalry Place is classified as an Access road under the one network road classification (ONRC). Dalry Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dalry Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Dalry Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Dalry Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dalry Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Damian Way (Weymouth)

The speed limit on Damian Way, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Damian Way connects to Mahia Road to the east and Weymouth Road to the west. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Damian Way is classified as a Secondary Collector road under the one network road classification (ONRC). Damian Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Damian Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2641 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Damian Way has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mahia Road: 50km/h (no proposed change)</li> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Damian Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Damian Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Daphne Street (Kelston)

The speed limit on Daphne Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Daphne Street connects to Kelkirk Street to the east and Hurley Place to the west. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Daphne Street is classified as an Access road under the one network road classification (ONRC). Daphne Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Daphne Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Daphne Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kelkirk Street: 50km/h (proposed 30km/h)</li> <li>Hurley Place: 50km/h (proposed 30km/h)</li> <li>Hurley Place: 50km/h (proposed 30km/h)</li> <li>Barbary Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Daphne Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Daphne Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – De Blodge Place (Clendon Park)

The speed limit on De Blodge Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>De Blodge Place connects to Maplesden Drive to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>De Blodge Place is classified as an Access road under the one network road classification (ONRC). De Blodge Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for De Blodge Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of De Bløge Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Maplesden Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps De Bløge Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for De Bløge Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Deborah Place (Mangere)

The speed limit on Deborah Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Deborah Place connects to Tranent Road to the east. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Deborah Place is classified as an Access road under the one network road classification (ONRC). Deborah Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Deborah Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Deborah Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tranent Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Deborah Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Deborah Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Desford Place (Mangere)

The speed limit on Desford Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Desford Place connects to Staverton Crescent to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Desford Place is classified as an Access road under the one network road classification (ONRC). Desford Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Desford Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Desford Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Staverton Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Desford Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Desford Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Devon Street (Te Atatu South)

The speed limit on Devon Street, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Devon Street connects to Cornwall Street to the west. This road provides access to residential properties and is approximately 0.09 km in length.</p> <p>Devon Street is classified as an access road under the one network road classification (ONRC). Devon Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 126 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Devon Street has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cornwall Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Devon Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Devon Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dignan Street (Point Chevalier)

The speed limit on Dignan Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dignan Street connects to Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Dignan Street is classified as a Secondary Collector road under the one network road classification (ONRC). Dignan Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dignan Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 728 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dignan Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>• Walford Street: 50 km/h (proposed 30 km/h)</li> <li>• Lister Street: 50 km/h (proposed 30 km/h)</li> <li>• Lynch Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Dignan Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dignan Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dione Place (Flat Bush)

The speed limit on Dione Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dione Place connects to Heidi Crescent to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Dione Place is classified as an Access road under the one network road classification (ONRC). Dione Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dione Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Dione Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Heidi Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Dione Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dione Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Dolphin Street (Pakuranga)**

The speed limit on Dolphin Street, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dolphin Street connects to Tiraumea Drive to the north. This road provides access to residential properties and is approximately 0.10 km in length.</p> <p>Dolphin Street is classified as an access road under the one network road classification (ONRC). Dolphin Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dolphin Street has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Dolphin Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.44 For urban areas this corresponds to an IRR band of **Medium High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Dolphin Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Domain Road (Weymouth)

The speed limit on Domain Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Domain Road connects to Gibbons Road to the north and McLeod Road to the south. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Domain Road is classified as an Access road under the one network road classification (ONRC). Domain Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one serious crash, one non-injury crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Domain Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Domain Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> <li>McLeod Road: 50km/h (proposed 30km/h)</li> <li>Waimai Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Domain Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Domain Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Don Place (Otarā)

The speed limit on Don Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Don Place connects to Vickerman Street to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Don Place is classified as an Access road under the one network road classification (ONRC). Don Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Don Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 176 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Don Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Vickerman Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Don Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Don Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Doone Place (Massey)

The speed limit on Doone Place, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Doone Place connects to Triangle Road to the north. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Doone Place is classified as an Access road under the one network road classification (ONRC). Doone Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Doone Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 320 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Doone Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Triangle Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Doone Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Doone Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Doughty Place (Otara)

The speed limit on Doughty Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Doughty Place connects to Hamill Road to the north. This road provides access to residential properties and is approximately 0.15km in length.  Doughty Place is classified as an Access road under the one network road classification (ONRC). Doughty Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Doughty Place were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Doughty Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hamill Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Doughty Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Doughty Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dovey Place (Massey)

The speed limit on Dovey Place, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dovey Place connects to Waimumu Road to the south. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Dovey Place is classified as an Access road under the one network road classification (ONRC). Dovey Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dovey Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 249 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Dovey Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimumu Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Dovey Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dovey Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Driver Road (Mangere East)

The speed limit on Driver Road, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Driver Road connects to Vine Street to the north and Tennessee Avenue to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Driver Road is classified as an Access road under the one network road classification (ONRC). Driver Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Driver Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 470 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Driver Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Vine Street: 50km/h (proposed 30km/h)</li> <li>• Tennessee Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Driver Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Driver Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Drummond Drive (Ranui)

The speed limit on Drummond Drive, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Drummond Drive connects to Waitemata Drive to the east and Corran Place to the west. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Drummond Drive is classified as an Access road under the one network road classification (ONRC). Drummond Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Drummond Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Drummond Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waitemata Drive: 50km/h (no proposed change)</li> <li>Corran Place: 50km/h (proposed 30km/h)</li> <li>Hibernian Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Drummond Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Drummond Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Duggan Avenue (Mangere)

The speed limit on Duggan Avenue, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Duggan Avenue connects to Friesian Drive to the north and Massey Road to the south. This road provides access to residential properties and is approximately 0.85km in length.</p> <p>Duggan Avenue is classified as an Access road under the one network road classification (ONRC). Duggan Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Duggan Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 301 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Duggan Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Friesian Drive: 50km/h (proposed 30km/h)</li> <li>• Massey Road: 50km/h (no proposed change)</li> <li>• Leeson Place: 50km/h (proposed 30km/h)</li> <li>• Wayne Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Duggan Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Duggan Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Duke Avenue (Pukekohe)

The speed limit on Duke Avenue, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Duke Avenue connects to Princes Street West to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Duke Avenue is classified as an Access road under the one network road classification (ONRC). Duke Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Duke Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 160 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Duke Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Princes Street West: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Duke Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Duke Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dunbarton Drive (Ranui)

The speed limit on Dunbarton Drive, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dunbarton Drive connects to Hibernian Drive to the east and Armada Drive to the west. This road provides access to residential properties and is approximately 0.17km in length.  Dunbarton Drive is classified as an Access road under the one network road classification (ONRC). Dunbarton Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Dunbarton Drive were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dunbarton Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hibernian Drive: 50km/h (proposed 30km/h)</li> <li>• Armada Drive: 50km/h (proposed 30km/h)</li> <li>• Corran Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Dunbarton Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dunbarton Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dungarvon Place (Clendon Park)

The speed limit on Dungarvon Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dungarvon Place connects to Maplesden Drive to the east. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Dungarvon Place is classified as an Access road under the one network road classification (ONRC). Dungarvon Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dungarvon Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 240 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Dungarvon Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Maplesden Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Dungarvon Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dungarvon Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Dunoon Close (Flat Bush)

The speed limit on Dunoon Close, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dunoon Close connects to Cyril French Drive to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Dunoon Close is classified as an Access road under the one network road classification (ONRC). Dunoon Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dunoon Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dunoon Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Dunoon Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Dunoon Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Durrant Place (Kelston)

The speed limit on Durrant Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Durrant Place connects to Queen Mary Avenue to the west. This road provides access to residential properties and is approximately 0.55km in length.</p> <p>Durrant Place is classified as an Access road under the one network road classification (ONRC). Durrant Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Durrant Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 300 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Durrant Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Queen Mary Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Durrant Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.92. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Durrant Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Eaves Bush Parade (Orewa)

The speed limit on Eaves Bush Parade, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Eaves Bush Parade connects to Kensington Drive to the east and Panorama Heights to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Eaves Bush Parade is classified as a Secondary Collector road under the one network road classification (ONRC). Eaves Bush Parade is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Eaves Bush Parade were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Eaves Bush Parade has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kensington Drive: 50km/h (proposed 30km/h)</li> <li>• Panorama Heights: 50km/h (proposed 30km/h)</li> <li>• Parkside Drive: 50km/h (proposed 30km/h)</li> <li>• Hibiscus Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Eaves Bush Parade has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Eaves Bush Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ebanjane Way (Weymouth)

The speed limit on Ebanjane Way, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ebanjane Way connects to Nicholas Gibbons Drive to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Ebanjane Way is classified as an Access road under the one network road classification (ONRC). Ebanjane Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ebanjane Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ebanjane Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nicholas Gibbons Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ebanjane Way has the following information:

- Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ebanjane Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ebenezer Way (Weymouth)

The speed limit on Ebenezer Way, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ebenezer Way connects to Palmers Road to the north. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Ebenezer Way is classified as an Access road under the one network road classification (ONRC). Ebenezer Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ebenezer Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ebenezer Way has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Palmers Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ebenezer Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ebenezer Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edenvale Crescent (Mount Eden)

The speed limit on Edenvale Crescent, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edenvale Crescent connects to Wynyard Road to the west. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Edenvale Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Edenvale Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edenvale Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 825 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Edenvale Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wynyard Road: 50km/h (proposed 30km/h)</li> <li>Kelly Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Edenvale Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edenvale Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edenvale Park Road (Mount Eden)

The speed limit on Edenvale Park Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edenvale Park Road connects to Wynyard Road to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Edenvale Park Road is classified as a Secondary Collector road under the one network road classification (ONRC). Edenvale Park Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edenvale Park Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 825 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Edenvale Park Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wynyard Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Edenvale Park Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edenvale Park Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edgewater Drive (Pakuranga)

The speed limit on Edgewater Drive, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edgewater Drive connects to Ti Rakau Drive to the east. This road provides access to residential properties and is approximately 1.59km in length.</p> <p>Edgewater Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Edgewater Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one serious and six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edgewater Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1346 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Edgewater Drive has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Snell Place: 50km/h (proposed 30km/h)</li> <li>Mangos Place: 50km/h (proposed 30km/h)</li> <li>Riverina Avenue: 50km/h (proposed 30km/h)</li> <li>Raewyn Place: 50km/h (proposed 30km/h)</li> <li>Susanne Place: 50km/h (proposed 30km/h)</li> <li>Ti Rakau Drive: 60km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Edgewater Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 2.51. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edgewater Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edith Street (Point Chevalier)

The speed limit on Edith Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edith Street connects to Harbour View Road to the west and Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Edith Street is classified as an Access road under the one network road classification (ONRC). Edith Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edith Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Edith Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Harbour View Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Edith Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.55. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edith Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edwards Avenue (Henderson)

The speed limit on Edwards Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edwards Avenue connects to Fairdene Avenue to the east and Rathgar Road to the west. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Edwards Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Edwards Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one serious crash, four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edwards Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1635 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Edwards Avenue has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Fairdene Avenue: 50km/h (proposed 30km/h)</li> <li>• Rathgar Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Edwards Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edwards Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Edwin Freeman Place (Ranui)

The speed limit on Edwin Freeman Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Edwin Freeman Place connects to Armada Drive to the east. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Edwin Freeman Place is classified as an Access road under the one network road classification (ONRC). Edwin Freeman Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Edwin Freeman Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Edwin Freeman Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Armada Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Edwin Freeman Place has the following information:

- Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Edwin Freeman Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Eileen Lane (Otara)

The speed limit on Eileen Lane, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Eileen Lane connects to Johnstones Road to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Eileen Lane is classified as an Access road under the one network road classification (ONRC). Eileen Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Eileen Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Eileen Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Johnstones Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Eileen Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Eileen Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Elisa Lane (Ranui)

The speed limit on Elisa Lane, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Elisa Lane connects to Childers Road to the west. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Elisa Lane is classified as an Access road under the one network road classification (ONRC). Elisa Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Elisa Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 267 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Elisa Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Childers Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Elisa Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Elisa Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Elizabeth Street (Orewa)

The speed limit on Elizabeth Street, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Elizabeth Street connects to Puriri Avenue to the north and West Hoe Road to the south. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Elizabeth Street is classified as a Secondary Collector road under the one network road classification (ONRC). Elizabeth Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Elizabeth Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 505 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Elizabeth Street has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Puriri Avenue: 50km/h (proposed 30km/h)</li> <li>• West Hoe Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Elizabeth Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Elizabeth Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ellen Street (Manurewa East)

The speed limit on Ellen Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ellen Street connects to Scotts Road to the east and Mcannalley Street to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Ellen Street is classified as an Access road under the one network road classification (ONRC). Ellen Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ellen Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ellen Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Scotts Road: 50km/h (proposed 30km/h)</li> <li>Mcannalley Street: 50km/h (proposed 30km/h)</li> <li>Browning Street: 50km/h (proposed 30km/h)</li> <li>Short Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ellen Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ellen Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Eloise Place (Clendon Park)**

The speed limit on Eloise Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Eloise Place connects to Belville Drive to the east. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Eloise Place is classified as an Access road under the one network road classification (ONRC). Eloise Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Eloise Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Eloise Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bellville Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Eloise Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Eloise Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Elsa Lane (Otara)

The speed limit on Elsa Lane, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Elsa Lane connects to Vickerman Street to the east. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Elsa Lane is classified as an Access road under the one network road classification (ONRC). Elsa Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Elsa Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 176 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Elsa Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Vickerman Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Elsa Lane has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Elsa Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Elvira Place (Ranui)

The speed limit on Elvira Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Elvira Place connects to Ulrich Drive to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Elvira Place is classified as an Access road under the one network road classification (ONRC). Elvira Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Elvira Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 370 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Elvira Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Urlich Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Elvira Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Elvira Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Elwyn Close (Flat Bush)

The speed limit on Elwyn Close, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Elwyn Close connects to Cyril French Drive to the north. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Elwyn Close is classified as an Access road under the one network road classification (ONRC). Elwyn Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Elwyn Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Elwyn Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Elwyn Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Elwyn Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Emilia Nixon Lane (Stonefields)

The speed limit on Emilia Nixon Lane, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Emilia Nixon Lane connects to Barbarich Drive to the west and Wynne Gray Avenue to the east. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Emilia Nixon Lane is classified as an Access road under the one network road classification (ONRC). Emilia Nixon Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Emilia Nixon Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Emilia Nixon Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>• Searle Street: 50km/h (proposed 30km/h)</li> <li>• Wynne Gray Avenue: 50km/h (proposed 30km/h)</li> <li>• Baber Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Emilia Nixon Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Emilia Nixon Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Emsworth Court (Pukekohe)

The speed limit on Emsworth Court, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Emsworth Court connects to Wellington Street to the east. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Emsworth Court is classified as an Access road under the one network road classification (ONRC). Emsworth Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Emsworth Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Emsworth Court has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wellington Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Emsworth Court has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Emsworth Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Endeavour Street (Blockhouse Bay)

The speed limit on Endeavour Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Endeavour Street connects to Kinross Street to the north. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Endeavour Street is classified as a Secondary Collector road under the one network road classification (ONRC). Endeavour Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Endeavour Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 802 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Endeavour Street has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kinross Street: 50km/h (no proposed change)</li> <li>• Gilfillan Street: 50km/h (proposed 30km/h)</li> <li>• Armagh Road: 50km/h (proposed 30km/h)</li> <li>• Barton Street East: 50km/h (proposed 30km/h)</li> <li>• Wade Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Endeavour Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Endeavour Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Erica Road (Flat Bush)

The speed limit on Erica Road, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Erica Road connects to Baverstock Road to the north and Stancombe Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Erica Road is classified as an Access road under the one network road classification (ONRC). Erica Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Erica Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Erica Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> <li>Stancombe Road: 60km/h (no proposed change)</li> <li>Magnolia Place: 50km/h (proposed 30km/h)</li> <li>Maypark Crescent: 50km/h (proposed 30km/h)</li> <li>Kestev Drive: 50km/h (proposed 30km/h)</li> <li>Agapanthus Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Erica Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Erica Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Esplanade Road (Mount Eden)

The speed limit on Esplanade Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Esplanade Road connects to Mount Eden Road to the north and Lovelock Avenue to the south. This road provides access to residential properties and is approximately 0.74km in length.</p> <p>Esplanade Road is classified as a Secondary Collector road under the one network road classification (ONRC). Esplanade Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one minor and five non-injury crashes. This resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Esplanade Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 830 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Esplanade Road has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mount Eden Road: 50km/h (no proposed change)</li> <li>• Puka Street: 50km/h (proposed 30km/h)</li> <li>• View Road: 50km/h (proposed 30km/h)</li> <li>• Bellevue Road: 50km/h (proposed 30km/h)</li> <li>• Lovelock Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Esplanade Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Esplanade Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Estuary Road (Weymouth)

The speed limit on Estuary Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Estuary Road connects to Evans Road to the south and Waimai Avenue to the west. This road provides access to residential properties and is approximately 0.46km in length.</p> <p>Estuary Road is classified as an Access road under the one network road classification (ONRC). Estuary Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Estuary Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 353 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Estuary Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Evans Road: 50km/h (proposed 30km/h)</li> <li>• Waimai Avenue: 50km/h (proposed 30km/h)</li> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> <li>• Mail Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Estuary Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Estuary Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Etherton Drive (Weymouth)

The speed limit on Etherton Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Etherton Drive connects to Finlayson Avenue to the north and Weymouth Road to the east. This road provides access to residential properties and is approximately 0.94km in length.</p> <p>Etherton Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Etherton Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: two minor crashes, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Etherton Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1611 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Etherton Drive has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Silver Creek Road: 50km/h (proposed 30km/h)</li> <li>Sparrow Place: 50km/h (proposed 30km/h)</li> <li>Reyland Close: 50km/h (proposed 30km/h)</li> <li>Harobed Place: 50km/h (proposed 30km/h)</li> <li>Janese Place: 50km/h (proposed 30km/h)</li> <li>Nicholas Gibbons Drive: 50km/h (proposed 30km/h)</li> <li>Palmers Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Etherton Drive has the following information:

- Collective Risk band of **Medium-High**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.48. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Etherton Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ettrick Place (Mangere East)

The speed limit on Ettrick Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ettrick Place connects to Chelburn Crescent to the east. This road provides access to residential properties and is approximately 0.90km in length.</p> <p>Ettrick Place is classified as an Access road under the one network road classification (ONRC). Ettrick Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ettrick Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 830 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ettrick Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Chelburn Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ettrick Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ettrick Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Evans Road (Weymouth)

The speed limit on Evans Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Evans Road connects to Blanes Road to the north and Greers Road to the south. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Evans Road is classified as an Access road under the one network road classification (ONRC). Evans Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Evans Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 353 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Evans Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blanes Road: 50km/h (proposed 30km/h)</li> <li>Greers Road: 50km/h (proposed 30km/h)</li> <li>Estuary Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Evans Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Evans Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Evergreen Rise (Kelston)

The speed limit on Evergreen Rise, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Evergreen Rise connects to Lynwood Road to the east. This road provides access to residential properties and is approximately 0.08km in length.  Evergreen Rise is classified as an Access road under the one network road classification (ONRC). Evergreen Rise is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Evergreen Rise were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 113 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Evergreen Rise has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Evergreen Rise has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Evergreen Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Everitt Road (Otara)

The speed limit on Everitt Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Everitt Road connects to Clayton Avenue to the north and Bairds Road to the east. This road provides access to residential properties and is approximately 0.67km in length.</p> <p>Everitt Road is classified as a Secondary Collector road under the one network road classification (ONRC). Everitt Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one serious crash, three non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Everitt Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1467 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Everitt Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Clayton Avenue: 50km/h (proposed 30km/h)</li> <li>Bairds Road: 50km/h (proposed 30km/h)</li> <li>Whitley Crescent: 50km/h (proposed 30km/h)</li> <li>Cooper Crescent: 50km/h (proposed 30km/h)</li> <li>Ross Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Everitt Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Everitt Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ewen Alison Avenue (Devonport)

The speed limit on Ewen Alison Avenue, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ewen Alison Avenue connects to Victoria Road to the east and Patuone Avenue to the west. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Ewen Alison Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Ewen Alison Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ewen Alison Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 691 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ewen Alison Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Victoria Road between Albert Road and northern end of Victoria Road: 50 km/h (proposed 30 km/h)</li> <li>• Patuone Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Cowper Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ewen Alison Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ewen Alison Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ewington Avenue (Mount Eden)

The speed limit on Ewington Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ewington Avenue connects to Dominion Road to the west and Kenyon Avenue to the north. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Ewington Avenue is classified as a Access road under the one network road classification (ONRC). Ewington Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ewington Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Commercial big box/industrial as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ewington Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Dominion Road: 50km/h (no proposed change)</li> <li>Kenyon Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ewington Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ewington Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Exotic Place (Massey)

The speed limit on Exotic Place, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Exotic Place connects to Triangle Road to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Exotic Place is classified as an Access road under the one network road classification (ONRC). Exotic Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Exotic Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Exotic Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Triangle Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Exotic Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Exotic Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Factory Road (Pukekohe)

The speed limit on Factory Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Factory Road connects to Belmont Road to the north and Victoria Street West to the south. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Factory Road is classified as a Secondary Collector road under the one network road classification (ONRC). Factory Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Factory Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> High and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Factory Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Belmont Road: 50km/h (proposed 30km/h)</li> <li>Victoria Street West: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Factory Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.95. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 60km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 60km/h as the safe and appropriate speed for Factory Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fairburn Road (Otahuhu)

The speed limit on Fairburn Road, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fairburn Road connects to Church Street to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.49km in length.</p> <p>Fairburn Road is classified as a Secondary Collector road under the one network road classification (ONRC). Fairburn Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fairburn Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fairburn Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>Great south Road: 50km/h (no proposed change)</li> <li>Tamaki Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fairburn Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fairburn Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fairdene Avenue (Henderson)

The speed limit on Fairdene Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fairdene Avenue connects to Lincoln Road to the east and Pinedale Place to the south. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Fairdene Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Fairdene Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fairdene Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2512 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fairdene Avenue has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Lincoln Road: 50km/h (no proposed change)</li> <li>• Pinedale Place: 50km/h (proposed 30km/h)</li> <li>• Edwards Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fairdene Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fairdene Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fairlea Road (Te Atatu South)

The speed limit on Fairlea Road, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fairlea Road connects to Wakeling Avenue to the north. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Fairlea Road is classified as an access road under the one network road classification (ONRC). Fairlea Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 217 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fairlea Road has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wakeling Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fairlea Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fairlea Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Farmer Street (Mangere East)

The speed limit on Farmer Street, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Farmer Street connects to Vine Street to the north and Tennessee Avenue to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Farmer Street is classified as a Primary Collector road under the one network road classification (ONRC). Farmer Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Farmer Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3603 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Farmer Street has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Vine Street: 50km/h (proposed 30km/h)</li> <li>• Tennessee Avenue: 50km/h (proposed 30km/h)</li> <li>• Trembath Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Farmer Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Farmer Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Farmer Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Farnol Street (Hillsborough)

The speed limit on Farnol Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Farnol Street connects to Belfast Street to the north. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Farnol Street is classified as an Access road under the one network road classification (ONRC). Farnol Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Farnol Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Belfast Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Farnol Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Farnol Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fayette Place (Te Atatu South)

The speed limit on Fayette Place, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fayette Place connects to Fowey Avenue to the east. This road provides access to residential properties and is approximately 0.06 km in length.</p> <p>Fayette Place is classified as an access road under the one network road classification (ONRC). Fayette Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 203 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fayette Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fowey Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fayette Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fayette Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Feltwell Place (Mangere Bridge)

The speed limit on Feltwell Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Feltwell Place connects to Ashcroft Avenue to the east. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Feltwell Place is classified as an Access road under the one network road classification (ONRC). Feltwell Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Feltwell Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 561 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Feltwell Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ashcroft Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Feltwell Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Feltwell Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fenton Street (Mount Eden)

The speed limit on Fenton Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fenton Street connects to Wynyard Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Fenton Street is classified as a Access road under the one network road classification (ONRC). Fenton Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fenton Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Commercial big box/industrial as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fenton Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Wynyard Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fenton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.35. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fenton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ferguson Road (Otara)

The speed limit on Ferguson Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ferguson Road connects to East Tamaki Road to the north and Preston Road to the east. This road provides access to residential properties and is approximately 1.01km in length.</p> <p>Ferguson Road is classified as a Primary Collector road under the one network road classification (ONRC). Ferguson Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: three minor crashes, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ferguson Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5347 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ferguson Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• East Tamaki Road: 60km/h (no proposed change)</li> <li>• Preston Road: 50km/h (no proposed change)</li> <li>• Wroughton Crescent: 50km/h (proposed 30km/h)</li> <li>• Ivon Road: 50km/h (proposed 30km/h)</li> <li>• Hannah Road: 50km/h (proposed 30km/h)</li> <li>• Capstick Road: 50km/h (proposed 30km/h)</li> <li>• Bond Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ferguson Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Ferguson Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Ferguson Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ferguson Street (Manurewa East)

The speed limit on Ferguson Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ferguson Street connects to Myers Road to the north and Greenmeadows Avenue to the east. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Ferguson Street is classified as a Secondary Collector road under the one network road classification (ONRC). Ferguson Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: two minor crashes, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ferguson Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1096 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ferguson Street has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Myers Road: 50km/h (proposed 30km/h)</li> <li>Greenmeadows Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ferguson Street has the following information:

- Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ferguson Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ferguson Street (Mangere East)

The speed limit on Ferguson Street, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ferguson Street connects to Yates Road to the west and Massey Road to the east. This road provides access to residential properties and is approximately 0.91km in length.</p> <p>Ferguson Street is classified as a Secondary Collector road under the one network road classification (ONRC). Ferguson Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one serious crash, one minor crash, seven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ferguson Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1081 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ferguson Street has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Yates Road: 50km/h (proposed 30km/h)</li> <li>• Massey Road: 50km/h (no proposed change)</li> <li>• Chadwick Crescent: 50km/h (proposed 30km/h)</li> <li>• Carnac Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ferguson Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ferguson Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fernbank Lane (Greenhithe)

The speed limit on Fernbank Lane, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fernbank Lane connects to George Deane Place to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Fernbank Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Fernbank Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fernbank Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fernbank Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>George Deane Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fernbank Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.10. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fernbank Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ferndale Avenue (Leigh)

The speed limit on Ferndale Avenue, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ferndale Avenue connects to Harbour View Road to the east and Puriri Avenue to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Ferndale Avenue is classified as an Access road under the one network road classification (ONRC). Ferndale Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ferndale Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 411 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ferndale Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Harbour View Road: 50km/h (proposed 30km/h)</li> <li>• Puriri Avenue: 50km/h (proposed 30km/h)</li> <li>• Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ferndale Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.19. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ferndale Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fernhill Way (Oteha)

The speed limit on Fernhill Way, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fernhill Way connects to Fields Parade to the north and Hooten Place to the south. This road provides access to residential properties and is approximately 1.93km in length.</p> <p>Fernhill Way is classified as an Access road under the one network road classification (ONRC). Fernhill Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fernhill Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fernhill Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fields Parade: 50km/h (proposed 30km/h)</li> <li>Hooten Place: 50km/h (proposed 30km/h)</li> <li>Medallion Drive: 50km/h (proposed 30km/h)</li> <li>Sonoma Crescent: 50km/h (proposed 30km/h)</li> <li>Sohlue Place: 50km/h (proposed 30km/h)</li> <li>Ponderosa Drive: 50km/h (proposed 30km/h)</li> <li>Crimson Park: 50km/h (proposed 30km/h)</li> <li>Pannill Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fernhill Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fernhill Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fernloche Place (Flat Bush)

The speed limit on Fernloche Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fernloche Place connects to Bronwylian Drive to the north. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Fernloche Place is classified as an Access road under the one network road classification (ONRC). Fernloche Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fernloche Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fernloche Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bronwylan Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fernloche Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fernloche Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fields Parade (Oteha)

The speed limit on Fields Parade, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fields Parade connects to Oteha Valley Road to the north and Fernhill Way to the south. This road provides access to residential properties and is approximately 0.79km in length.</p> <p>Fields Parade is classified as a Primary Collector road under the one network road classification (ONRC). Fields Parade is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fields Parade were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1994 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fields Parade has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Oteha Valley Road: 50km/h (no proposed change)</li> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> <li>Nimstedt Avenue: 50km/h (proposed 30km/h)</li> <li>Gleanor Avenue: 50km/h (proposed 30km/h)</li> <li>John Jennings Drive: 50km/h (proposed 30km/h)</li> <li>Sunnydale Place: 50km/h (proposed 30km/h)</li> <li>Horizon View Road: 50km/h (proposed 30km/h)</li> <li>Vicente Place: 50km/h (proposed 30km/h)</li> <li>Candlestick Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fields Parade has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fields Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Filgate Street (Hillsborough)

The speed limit on Filgate Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Filgate Street connects to Hoskins Avenue to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Filgate Street is classified as an Access road under the one network road classification (ONRC). Filgate Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Filgate Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Hoskins Avenue: 50km/h (proposed 30km/h)</li> <li>Bagley Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Filgate Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Filgate Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Finlayson Avenue (Clendon Park)

The speed limit on Finlayson Avenue, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Finlayson Avenue connects to Roscommon Road to the east and Palmers Road to the south. This road provides access to residential properties and is approximately 1.38km in length.</p> <p>Finlayson Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Finlayson Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirty eight crashes between 2016 and 2020: six serious crashes, five minor crashes, twenty seven non-injury crashes. This resulted in six Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Finlayson Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4046 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Finlayson Avenue has a mean operating speed in the range of 45-50km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roscommon Road: 60km/h (no proposed change)</li> <li>Palmers Road: 50km/h (proposed 30km/h)</li> <li>Cottrell Place: 50km/h (proposed 30km/h)</li> <li>Hanford Place: 50km/h (proposed 30km/h)</li> <li>Stoll Place: 50km/h (proposed 30km/h)</li> <li>Brava Place: 50km/h (proposed 30km/h)</li> <li>Brava Place: 50km/h (proposed 30km/h)</li> <li>Kopu Place: 50km/h (proposed 30km/h)</li> <li>Kopara Place: 50km/h (proposed 30km/h)</li> <li>Matua Place: 50km/h (proposed 30km/h)</li> <li>Ngatira Place: 50km/h (proposed 30km/h)</li> <li>Bundena Place: 50km/h (proposed 30km/h)</li> <li>Pureora Place: 50km/h (proposed 30km/h)</li> <li>Burundi Avenue: 50km/h (proposed 30km/h)</li> <li>Maplesden Drive: 50km/h (proposed 30km/h)</li> <li>Bellville Drive: 50km/h (proposed 30km/h)</li> <li>Wai Iti Place: 50km/h (proposed 30km/h)</li> <li>Moncrieff Avenue: 50km/h (proposed 30km/h)</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Finlayson Avenue has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Finlayson Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Finlayson Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Fintry Place (Flat Bush)**

The speed limit on Fintry Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fintry Place connects to Bronwylian Drive to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Fintry Place is classified as an Access road under the one network road classification (ONRC). Fintry Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fintry Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fintry Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bronwylan Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fintry Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fintry Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fisher Crescent (Otara)

The speed limit on Fisher Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fisher Crescent connects to Preston Road to the east. This road provides access to residential properties and is approximately 0.74km in length.</p> <p>Fisher Crescent is classified as an Access road under the one network road classification (ONRC). Fisher Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fisher Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 390 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fisher Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Preston Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fisher Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.80. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fisher Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Flat Bush Road (Otara)

The speed limit on Flat Bush Road, Otara, between Preston Road and the western end of Flat Bush Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>Infrastructure Risk Rating Manual 2016 (IRR)</li><li>WK NZTA MegaMaps tool</li><li>Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Flat Bush Road connects to Dawson Road to the east and Waimate Street to the west. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Flat Bush Road is classified as a Primary Collector road under the one network road classification (ONRC). Flat Bush Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Flat Bush Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li><b>Road stereotype:</b> Two lane undivided</li><li><b>Road alignment:</b> Straight</li><li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1974 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Flat Bush Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dawson Road: 50km/h (no proposed change)</li> <li>• Waimate Street: 50km/h (proposed 30km/h)</li> <li>• Vickerman Street: 50km/h (proposed 30km/h)</li> <li>• Oconnor Street: 50km/h (proposed 30km/h)</li> <li>• Piako Street: 50km/h (proposed 30km/h)</li> <li>• Preston Road: 50km/h (no proposed change)</li> <li>• Emerson Road: 50km/h (no proposed change)</li> <li>• Awatere Street: 50km/h (no proposed change)</li> <li>• Rapson Road: 50km/h (no proposed change)</li> <li>• Ravenna Way: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Flat Bush Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Flat Bush Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Flat Bush Road is a Primary Collector Road, that is not the intended function of this section of Flat Bush Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Flax Place (Stonefields)

The speed limit on Flax Place, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Flax Place connects to Vialou Lane to the west. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Flax Place is classified as an Access road under the one network road classification (ONRC). Flax Place is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Flax Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Flax Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Vialou Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Flax Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Flax Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fleming Street (Manurewa East)

The speed limit on Fleming Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fleming Street connects to Alfriston Road to the north and Mcannalley Street to the south. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Fleming Street is classified as a Secondary Collector road under the one network road classification (ONRC). Fleming Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fleming Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1937 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fleming Street has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Alfriston Road: 50km/h (no proposed change)</li> <li>McCannalley Street: 50km/h (proposed 30km/h)</li> <li>Hyde Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fleming Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fleming Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fleming Street (Mangere East)

The speed limit on Fleming Street, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fleming Street connects to Tennessee Avenue to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Fleming Street is classified as a Secondary Collector road under the one network road classification (ONRC). Fleming Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fleming Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1716 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fleming Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tennessee Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fleming Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.35. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fleming Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Flint Way (Stonefields)

The speed limit on Flint Way, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Flint Way connects to Ngahue Drive to the west and Magma Crescent to the east. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Flint Way is classified as an Access road under the one network road classification (ONRC). Flint Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Flint Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Flint Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ngahue Drive: 50km/h (no proposed change)</li> <li>• Magma Crescent: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Flint Way has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Flint Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Foote Street (Hillsborough)

The speed limit on Foote Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Foote Street connects to Hoskins Avenue to the east. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Foote Street is classified as an Access road under the one network road classification (ONRC). Foote Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Foote Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hoskins Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Foote Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 50km/h as the safe and appropriate speed for Foote Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Footwide Place (Weymouth)

The speed limit on Footwide Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Footwide Place connects to Settlers Cove to the north and Newbegin Place to the north. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Footwide Place is classified as an Access road under the one network road classification (ONRC). Footwide Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Footwide Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Footwide Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Settlers Cove: 50km/h (proposed 30km/h)</li> <li>• Newbegin Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Footwide Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Footwide Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Forbury Place (Mangere)

The speed limit on Forbury Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Forbury Place connects to Mascot Avenue to the east. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Forbury Place is classified as an Access road under the one network road classification (ONRC). Forbury Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Forbury Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Forbury Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mascot Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Forbury Place has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Forbury Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Forest Glen (Orewa)

The speed limit on Forest Glen, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Forest Glen connects to Annalise Place to the north and Puriri Avenue to the south. This road provides access to residential properties and is approximately 0.34km in length.  Forest Glen is classified as a Secondary Collector road under the one network road classification (ONRC). Forest Glen is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Forest Glen were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 485 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Forest Glen has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Annalise Place: 50km/h (proposed 30km/h)</li> <li>Puriri Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Forest Glen has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Forest Glen, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Formby Avenue (Point Chevalier)

The speed limit on Formby Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Formby Avenue connects to Pelham Avenue to the west and Point Chevalier Road. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Formby Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Formby Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Formby Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Formby Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (no proposed change)</li> <li>Pelham Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Formby Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Formby Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fort Lincoln Loop (Karaka)

The speed limit on Fort Lincoln Loop, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fort Lincoln Loop connects to Hayfield Way to the north. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Fort Lincoln Loop is classified as an Access road under the one network road classification (ONRC). Fort Lincoln Loop is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fort Lincoln Loop were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fort Lincoln Loop has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Hayfield Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fort Lincoln Loop has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fort Lincoln Loop, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Four Oaks Place (Pukekohe)

The speed limit on Four Oaks Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Four Oaks Place connects to Kauri Road to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Four Oaks Place is classified as an Access road under the one network road classification (ONRC). Four Oaks Place is a two-way, Two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Four Oaks Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Four Oaks Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kauri Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Four Oaks Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Four Oaks Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Fowey Avenue (Te Atatu South)**

The speed limit on Fowey Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fowey Avenue connects to McLeod Road to the north. This road provides access to residential properties and is approximately 0.14 km in length.</p> <p>Fowey Avenue is classified as an access road under the one network road classification (ONRC). Fowey Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 203 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fowey Avenue has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• McLeod Road: 50 km/h (proposed 30 km/h)</li> <li>• Fayette Place: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fowey Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fowey Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Frank Evans Place (Henderson)

The speed limit on Frank Evans Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Frank Evans Place connects to Swanson Road to the west. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Frank Evans Place is classified as a Secondary Collector road under the one network road classification (ONRC). Frank Evans Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Frank Evans Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 437 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Frank Evans Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Swanson Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Frank Evans Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Frank Evans Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fraser Road (Narrow Neck)

The speed limit on Fraser Road, Narrow Neck has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fraser Road connects to Old Lake Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Fraser Road is classified as an Access road under the one network road classification (ONRC). Fraser Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fraser Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fraser Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Old Lake Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fraser Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.92. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fraser Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Frederick Street (Hillsborough)

The speed limit on Frederick Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Frederick Street connects to Queenstown Road to the north and Hoskins Avenue to the south. This road provides access to residential properties and is approximately 1.19km in length.</p> <p>Frederick Street is classified as a Primary collector road under the one network road classification (ONRC). Frederick Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: two minor and two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Frederick Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Queenstown Road: 50km/h (no proposed change)</li> <li>Seacliffe Road: 50km/h (no proposed change)</li> <li>Carlton Street: 50km/h (proposed 30km/h)</li> <li>Lilac Grove: 50km/h (proposed 30km/h)</li> <li>Pallister Drive: 50km/h (proposed 30km/h)</li> <li>Belfast Street: 50km/h (proposed 30km/h)</li> <li>Goodall Street: 50km/h (proposed 30km/h)</li> <li>Bluff Terrace: 50km/h (proposed 30km/h)</li> <li>Hoskins Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Frederick Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.75. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Frederick Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Frederick Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Friesian Drive (Mangere)

The speed limit on Friesian Drive, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Friesian Drive connects to Massey Road to the east and Mascot Avenue to the west. This road provides access to residential properties and is approximately 0.93km in length.</p> <p>Friesian Drive is classified as a Primary Collector road under the one network road classification (ONRC). Friesian Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Friesian Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Friesian Drive has a mean operating speed in the range of 34-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Massey Road: 50km/h (no proposed change)</li> <li>• Mascot Avenue: 50km/h (proposed 30km/h)</li> <li>• Ashgrove Road: 50km/h (proposed 30km/h)</li> <li>• Nevis Place: 50km/h (proposed 30km/h)</li> <li>• Duggan Avenue: 50km/h (proposed 30km/h)</li> <li>• Wayne Drive: 50km/h (proposed 30km/h)</li> <li>• Imrie Avenue: 50km/h (proposed 30km/h)</li> <li>• Nicola Place: 50km/h (proposed 30km/h)</li> <li>• Paine Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Friesian Drive has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.24. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Friesian Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Friesian Drive is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fulton Crescent (Otara)

The speed limit on Fulton Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fulton Crescent connects to East Tamaki Road to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Fulton Crescent is classified as an Access road under the one network road classification (ONRC). Fulton Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fulton Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Fulton Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>East Tamaki Road: 60km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Fulton Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fulton Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Fynes Avenue (Stonefields)

The speed limit on Fynes Avenue, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fynes Avenue connects to Stonemason Avenue to the north and Tihī Street to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Fynes Avenue is classified as an Access road under the one network road classification (ONRC). Fynes Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fynes Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fynes Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>• Papango Street: 50km/h (proposed 30km/h)</li> <li>• Galway Bay Terrace: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Fynes Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fynes Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gallaher Street (Manurewa East)

The speed limit on Gallaher Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gallaher Street connects to Mcannalley Street to the south. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Gallaher Street is classified as an Access road under the one network road classification (ONRC). Gallaher Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gallaher Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 60 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Gallaher Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mcannalley Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Gallaher Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gallaher Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Galway Bay Terrace (Stonefields)

The speed limit on Galway Bay Terrace, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Galway Bay Terrace connects to Fynes Avenue to the west and Ganley Terrace to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Galway Bay Terrace is classified as an Access road under the one network road classification (ONRC). Galway Bay Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Galway Bay Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Galway Bay Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fynes Avenue: 50km/h (proposed 30km/h)</li> <li>Ganley Terrace: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Galway Bay Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Galway Bay Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ganley Terrace (Stonefields)

The speed limit on Ganley Terrace, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ganley Terrace connects to Papango Street to the south and Purchas Hill Drive to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Ganley Terrace is classified as an Access road under the one network road classification (ONRC). Ganley Terrace is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ganley Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ganley Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Papango Street: 50km/h (proposed 30km/h)</li> <li>Galway Bay Terrace: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>Purchas Hill Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ganley Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ganley Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Garin Way (Stonefields)

The speed limit on Garin Way, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Garin Way connects to Brian Slater Way to the north and Tihi Street to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Garin Way is classified as an Access road under the one network road classification (ONRC). Garin Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Garin Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Garin Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Styak Street: 50km/h (proposed 30km/h)</li> <li>• Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>• Singleton Avenue: 50km/h (proposed 30km/h)</li> <li>• Brian Slater Way: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Garin Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Garin Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Garrett Place (Otaru)

The speed limit on Garrett Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Garrett Place connects to Tindall Crescent to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Garrett Place is classified as an Access road under the one network road classification (ONRC). Garrett Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Garrett Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 769 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Garrett Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tindall Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Garrett Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Garrett Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Geddes Terrace (Avondale)

The speed limit on Geddes Terrace, Avondale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Geddes Terrace connects to Crayford Street West to the north and St Jude Street to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Geddes Terrace is classified as an Access road under the one network road classification (ONRC). Geddes Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Geddes Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 676 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Geddes Terrace has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Crayford St West: 50km/h (proposed 30km/h)</li> <li>• St Jude Street: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Geddes Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Geddes Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – George Arthur Place (Pukekohe)

The speed limit on George Arthur Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>George Arthur Place connects to Helvetia Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>George Arthur Place is classified as an Access road under the one network road classification (ONRC). George Arthur Place is a two-way, Two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for George Arthur Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of George Arthur Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Helvetia Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps George Arthur Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for George Arthur Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – George Deane Place (Greenhithe)

The speed limit on George Deane Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>George Deane Place connects to William Gamble Drive to the west. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>George Deane Place is classified as a Secondary Collector road under the one network road classification (ONRC). George Deane Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for George Deane Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of George Deane Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• William Gamble Drive: 50km/h (proposed 30km/h)</li> <li>• Fernbank Lane: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps George Deane Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for George Deane Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gibbons Road (Weymouth)

The speed limit on Gibbons Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gibbons Road connects to Blanes Road to the east and Domain Road to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Gibbons Road is classified as a Secondary Collector road under the one network road classification (ONRC). Gibbons Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gibbons Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1207 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Gibbons Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blanes Road: 50km/h (proposed 30km/h)</li> <li>Domain Road: 50km/h (proposed 30km/h)</li> <li>Honey Place: 50km/h (proposed 30km/h)</li> <li>Crispian Place: 50km/h (proposed 30km/h)</li> <li>Huber Street: 50km/h (proposed 30km/h)</li> <li>Booker Place: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Gibbons Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gibbons Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gila Place (Weymouth)

The speed limit on Gila Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gila Place connects to Weymouth Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Gila Place is classified as an Access road under the one network road classification (ONRC). Gila Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gila Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Gila Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Gila Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gila Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gilfillan Street (Blockhouse Bay)

The speed limit on Gilfillan Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gilfillan Street connects to Armagh Road to the west and Blockhouse Bay Road to the east. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Gilfillan Street is classified as a Primary Collector road under the one network road classification (ONRC). Gilfillan Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gilfillan Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3867 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Gilfillan Street has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blockhouse Bay Road: 50km/h (proposed 30km/h)</li> <li>Armagh Road: 50km/h (proposed 30km/h)</li> <li>Endeavour Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Gilfillan Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Gilfillan Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Gilfillan Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gill Crescent (Blockhouse Bay)

The speed limit on Gill Crescent, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gill Crescent connects to Blockhouse Bay Road to the west. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Gill Crescent is classified as an Access road under the one network road classification (ONRC). Gill Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gill Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Gill Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Blockhouse Bay Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Gill Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gill Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gingernut Place (Karaka)

The speed limit on Gingernut Place, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gingernut Place connects to Ockhams Street to the east and Songline Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Gingernut Place is classified as an Access road under the one network road classification (ONRC). Gingernut Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gingernut Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Gingernut Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> <li>Songline Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Gingernut Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gingernut Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Girdhar Place (Pukekohe)

The speed limit on Girdhar Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Girdhar Place connects to Cooper Street to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Girdhar Place is classified as an Access road under the one network road classification (ONRC). Girdhar Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Girdhar Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 540 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Girdhar Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cooper Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Girdhar Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Girdhar Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Glanville Terrace (Parnell)

The speed limit on Glanville Terrace, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glanville Terrace connects to Crescent Road to the north and Takutai Street to the south. This road provides access to residential properties and is approximately 0.56km in length.</p> <p>Glanville Terrace is classified as an Access road under the one network road classification (ONRC). Glanville Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glanville Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Glanville Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Crescent Road: 50km/h (proposed 30km/h)</li> <li>Takutai Street: 50km/h (proposed 30km/h)</li> <li>Lichfield Road: 50km/h (proposed 30km/h)</li> <li>Awatea Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Glanville Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Glanville Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gleanor Avenue (Oteha)

The speed limit on Gleanor Avenue, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gleanor Avenue connects to Nimstedt Avenue to the north and Fields Parade to the west. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Gleanor Avenue is classified as an Access road under the one network road classification (ONRC). Gleanor Avenue is a two-way, Two lane undivided road. There is pedestrian amenities on one side of the road and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gleanor Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Gleanor Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Nimstedt Avenue: 50km/h (proposed 30km/h)</li> <li>• Fields Parade: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Gleanor Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gleanor Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Glen Norman Avenue (Henderson)

The speed limit on Glen Norman Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glen Norman Avenue connects to Rathgar Road to the east and Normandy Place to the north. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Glen Norman Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Glen Norman Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glen Norman Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2920 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Glen Norman Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> <li>Normandy Place: 50km/h (proposed 30km/h)</li> <li>Hughdene Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Glen Norman Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Glen Norman Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Glen Norman Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Glen Road (Stanley Point)**

The speed limit on Glen Road, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glen Road connects to Waterview Road to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Glen Road is classified as an Access road under the one network road classification (ONRC). Glen Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glen Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Glen Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waterview Road: 50 km/h (proposed 30 km/h)</li> <li>• Calliope Road: 50 km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Glen Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Glen Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Glenarden Way (Ranui)

The speed limit on Glenarden Way, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glenarden Way connects to Kilmarnock Avenue to the north and to the south. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Glenarden Way is classified as an Access road under the one network road classification (ONRC). Glenarden Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glenarden Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Glenarden Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kilmarnock Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Glenarden Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Glenarden Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Glenbrook Waiuku Road (Glenbrook)

The speed limit on Glenbrook Waiuku Road, Glenbrook, between 1010 metres north east of Mission Bush Road and 100 metres south west of Brookside Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glenbrook Waiuku Road connects to Glenbrook Road to the north and Collingwood Road to the south. This road provides access to residential properties and is approximately 1.70km in length.</p> <p>Glenbrook Waiuku Road is classified as an Arterial road under the one network road classification (ONRC). Glenbrook Waiuku Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glenbrook Waiuku Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8413 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Variable speed limit signs consistent with the requirements of Traffic Note 37, will be implemented for the proposed variable school zone.
(j) the views of interested persons and groups.	Central government policy is to implement speed limits of 60km/h or less adjacent to rural schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"
(k) Setting of Speed Limits Rule 2017	The requirements of the Setting of Speed Limits Rule 2017 are met as shown in Table 3
(l) WK Traffic Note 37-Revision 2	The requirements of WK Traffic Note 37-Revision2 are met as shown in Table 3

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Glenbrook Waiuku Road has a mean operating speed in the range of 75-79km/h. (note that this speed data dates back to before the implementation of a permanent speed limit reduction from 70km/h to 60km/h so operating speeds are expected to have reduced.)  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Brookside Road: 80km/h (no proposed change)</li> <li>• Glenbrook Road: 80km/h (no proposed change)</li> <li>• Mission Bush Road: 80km/h (no proposed change)</li> </ul>

In addition to the factors outlined in Table 1, further relevant information was sought to meet the requirements of WK Traffic Note 37-Revision 2 and the Setting of Speed Limits Rule 2017 as summarised in Table 3 below.

Table 3: Required Information

Required Information	Data & Source
<p>With reference to WK Traffic Note 37-Revision 2, a road controlling authority may set a 40km/h variable speed limit in a school zone under the following conditions:</p> <p>(a) <i>There is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and the traffic on the road outside the school meets at least one of the following conditions:</i></p> <p>(i) <i>The mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(ii) <i>The 85<sup>th</sup> percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(iii) <i>There have been pedestrian, cycle or speed-related crashes near the school in the previous five years; or</i></p> <p>(iv) <i>The school-related activity in condition 5(a) occurs on a main traffic route; or</i></p> <p>(b) <i>There is school-related pedestrians or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside and safe and appropriate traffic engineering measures are installed so that the mean operating speeds of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating</i></p>	<p>The requirements of condition "a" are met as follows:</p> <p>Due to growth in the school roll associated with recent development in the Glenbrook Beach area we consider that this criteria is likely to be already met and student numbers will have increased further by the time the decision on the proposed bylaw amendment is made. (Note actual counts have been unable to be completed due to Covid lockdowns temporarily closing the school.)</p> <p>According to MegaMaps, this section of Glenbrook Waiuku Road has a mean operating speed in the range of 75-79km/h. As noted in the table above recent changes to the permanent speed limit since this data was collected can be expected to have resulted in some reduction, however mean operating speeds will still be well above 45km/h.</p> <p>Furthermore, Glenbrook Waiuku Road is classified as an Arterial Road and is a main traffic route.</p>
<p>With reference to the Setting of Speed Limits Rule 2017, a variable speed limit may apply when:</p> <p>(a) <i>The speed limit needs to vary in order to be safe and appropriate; and</i></p>	<p>The requirements of condition "a" are met as specified above. It has been determined that since the walking activity around the school is largely concentrated around pick-up and drop-off hours, a variable speed limit would be suitable.</p> <p>The requirements of condition "b (ii)" are met due to the type of road users during the hours of</p>

<p>(b) <i>It is necessary to address or manage one or more of the following situations or environments</i></p> <p>(i) <i>Different numbers and types of road users or different traffic movements; or</i></p> <p>(ii) <i>The effects of changing traffic volumes, including to ease congestion; or</i></p> <p>(iii) <i>For emergency or temporary traffic management; or</i></p> <p>(iv) <i>A crash risk posed by turning or crossing traffic; or</i></p> <p>(v) <i>Changing environmental conditions</i></p>	<p>operation of the proposed variable speed zone being primarily schoolchildren, which is not the case outside of the hours of operation for the proposed variable speed zone.</p>
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### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Glenbrook Waiuku Road has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 80km/h.

### **Step 4: Conclusion**

Existing speed limit: 60km/h

*Proposed safe and appropriate speed limit recommendation = variable 40km/h and 60km/h.*

As outlined in Table 3, an assessment has been undertaken to determine if the warrant is met for a 40km/h variable speed school zone.

Glenbrook Waiuku Road has been determined to meet the requirements set out in the New Zealand Transport Agency's Traffic Note 37-Revision 2. Therefore, we have determined a variable 40km/h speed limit to be safer and more appropriate as it have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Variable speed limits are proposed to be implemented with electronic variable signs on approaches to the school.

## **Speed Limit Review – Glennis Place (Clendon Park)**

The speed limit on Glennis Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glennis Place connects to Frobisher Way to the west. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Glennis Place is classified as an Access road under the one network road classification (ONRC). Glennis Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glennis Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1079 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Glennis Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Frobisher Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Glennis Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Glennis Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Glynnbrooke Street (Te Atatu South)

The speed limit on Glynnbrooke Street, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glynnbrooke Street connects to Roberts Road to the north and McLeod Road to the south. This road provides access to residential properties and is approximately 0.42 km in length.</p> <p>Glynnbrooke Street is classified as an access road under the one network road classification (ONRC). Glynnbrooke Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: 1 minor and 1 non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 773 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Glynnbrooke Street has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roberts Road: 50 km/h (proposed 30 km/h)</li> <li>McLeod Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Glynnbrooke Street has the following information:

- Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**
- The Infrastructure Risk Rating Score is 1.82 For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Glynnbrooke Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Goodall Street (Hillsborough)

The speed limit on Goodall Street, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Goodall Street connects to Frederick Street to to the south. This road provides access to residential properties and is approximately 0.79km in length.</p> <p>Goodall Street is classified as a Secondary Collector road under the one network road classification (ONRC). Goodall Street is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1433 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Goodall Street has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Frederick Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Goodall Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.98. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Goodall Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Grant Avenue (Otaru)

The speed limit on Grant Avenue, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Grant Avenue connects to Hills Road to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Grant Avenue is classified as an Access road under the one network road classification (ONRC). Grant Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Grant Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 447 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Grant Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hills Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Grant Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Grant Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Graysons Lane (Mount Eden)

The speed limit on Graysons Lane, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Graysons Lane connects to Edenvale Crescent to the west. This road provides access to residential properties and is approximately 0.06km in length.  Graysons Lane is classified as a Access road under the one network road classification (ONRC). Graysons Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Graysons Lane were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Graysons Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Edenvale Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Graysons Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Graysons Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Greenbough Lane (Greenhithe)

The speed limit on Greenbough Lane, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Greenbough Lane connects to Kyle Road to the west and Kyle Road to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Greenbough Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Greenbough Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Greenbough Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Greenbough Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kyle Road: 50km/h (proposed 30km/h)</li> <li>• Ashurst Lane: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Greenbough Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Greenbough Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Greenbrooke Drive (Flat Bush)

The speed limit on Greenbrooke Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Greenbrooke Drive connects to Silverwood Drive to the north and Plantation Avenue to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Greenbrooke Drive is classified as an Access road under the one network road classification (ONRC). Greenbrooke Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Greenbrooke Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Greenbrooke Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Silverwood Drive: 50km/h (proposed 30km/h)</li> <li>Plantation Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Greenbrooke Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Greenbrooke Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Greenmeadows Avenue (Manurewa East)

The speed limit on Greenmeadows Avenue, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Greenmeadows Avenue connects to Myers Road to the north and Ferguson Street to the south. This road provides access to residential properties and is approximately 0.71km in length.</p> <p>Greenmeadows Avenue is classified as an Access road under the one network road classification (ONRC). Greenmeadows Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Greenmeadows Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 748 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Greenmeadows Avenue has a mean operating speed in the range of 30-34km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Myers Road: 50km/h (proposed 30km/h)</li> <li>• Ferguson Street: 50km/h (proposed 30km/h)</li> <li>• Sterling Avenue: 50km/h (proposed 30km/h)</li> <li>• Sexton Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Greenmeadows Avenue has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Greenmeadows Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Greers Road (Weymouth)

The speed limit on Greers Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Greers Road connects to Evans Road to the north and McLeod Road to the west. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Greers Road is classified as an Access road under the one network road classification (ONRC). Greers Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Greers Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 353 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Greers Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Evans Road: 50km/h (proposed 30km/h)</li> <li>McLeod Road: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Mail Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Greers Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Greers Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Greig Place (Pukekohe)

The speed limit on Greig Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Greig Place connects to Victoria Street West to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Greig Place is classified as an Access road under the one network road classification (ONRC). Greig Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Greig Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 160 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Greig Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Victoria Street West: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Greig Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Greig Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Growers Lane (Mangere East)

The speed limit on Growers Lane, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Growers Lane connects to Yates Road to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Growers Lane is classified as an Access road under the one network road classification (ONRC). Growers Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Growers Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Growers Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Yates Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Growers Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Growers Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Grundy Place (Otara)

The speed limit on Grundy Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Grundy Place connects to Hills Road to the west. This road provides access to residential properties and is approximately 0.09km in length.  Grundy Place is classified as an Access road under the one network road classification (ONRC). Grundy Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Grundy Place were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Grundy Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Hills Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Grundy Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Grundy Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Guard Crescent (Stonefields)

The speed limit on Guard Crescent, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Guard Crescent connects to Tihi Street to the east. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Guard Crescent is classified as an Access road under the one network road classification (ONRC). Guard Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Guard Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Guard Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tihi Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Guard Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Guard Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gubb Place (Otara)

The speed limit on Gubb Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gubb Place connects to Hills Road to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Gubb Place is classified as an Access road under the one network road classification (ONRC). Gubb Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gubb Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Gubb Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hills Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Gubb Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gubb Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Guthrey Place (Otaru)

The speed limit on Guthrey Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Guthrey Place connects to Bairds Road to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Guthrey Place is classified as an Access road under the one network road classification (ONRC). Guthrey Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Guthrey Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Guthrey Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Guthrey Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Guthrey Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Guyon Street (Stonefields)

The speed limit on Guyon Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Guyon Street connects to Tihi Street to the south and Stonemason Avenue to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Guyon Street is classified as an Access road under the one network road classification (ONRC). Guyon Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Guyon Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Guyon Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Guyon Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Guyon Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Halloran Place (Massey)

The speed limit on Halloran Place, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Halloran Place connects to Waimumu Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Halloran Place is classified as an Access road under the one network road classification (ONRC). Halloran Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Halloran Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 116 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Halloran Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimumu Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Halloran Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Halloran Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hamana Street (Narrow Neck)

The speed limit on Hamana Street, Narrow Neck has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hamana Street connects to Seacliffe Avenue to the north and Old Lake Road to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Hamana Street is classified as a Secondary Collector road under the one network road classification (ONRC). Hamana Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hamana Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3863 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hamana Street has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Seacliffe Avenue: 50km/h (proposed 30km/h)</li> <li>• Old Lake Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hamana Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hamana Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hamblyn Place (Ranui)

The speed limit on Hamblyn Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hamblyn Place connects to Luanda Drive to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Hamblyn Place is classified as an Access road under the one network road classification (ONRC). Hamblyn Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hamblyn Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 128 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hamblyn Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Luanda Drive between waitemata Drive roundabout and Swanson Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hamblyn Place has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hamblyn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hamill Road (Otarā)

The speed limit on Hamill Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hamill Road connects to Johnstones Road to the north and Hills Road to the south. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Hamill Road is classified as a Secondary Collector road under the one network road classification (ONRC). Hamill Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor and two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hamill Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 808 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hamill Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Johnstones Road: 50km/h (proposed 30km/h)</li> <li>• Blampied Road: 50km/h (proposed 30km/h)</li> <li>• Dairy Road: 50km/h (proposed 30km/h)</li> <li>• Doughty Place: 50km/h (proposed 30km/h)</li> <li>• Hills Road: 50km/h (proposed 30km/h)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hamill Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hamill Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hanan Place (Weymouth)

The speed limit on Hanan Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hanan Place connects to Weymouth Road to the west. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Hanan Place is classified as an Access road under the one network road classification (ONRC). Hanan Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hanan Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hanan Place has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hanan Place has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.03. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 50km/h as the safe and appropriate speed for Hanan Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hanford Place (Clendon Park)

The speed limit on Hanford Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hanford Place connects to Finlayson Avenue to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Hanford Place is classified as an Access road under the one network road classification (ONRC). Hanford Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hanford Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 301 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hanford Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hanford Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hanford Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hannah Road (Otara)

The speed limit on Hannah Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hannah Road connects to Ferguson Road to the north and Kudu Road to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Hannah Road is classified as a Secondary Collector road under the one network road classification (ONRC). Hannah Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hannah Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1206 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hannah Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ferguson Road: 50km/h (proposed 30km/h)</li> <li>Kudu Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hannah Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hannah Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harbour View Road (Point Chevalier)

The speed limit on Harbour View Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harbour View Road connects to Joan Street to the north and Raymond Street to the south. This road provides access to residential properties and is approximately 0.67km in length.</p> <p>Harbour View Road is classified as an Access road under the one network road classification (ONRC). Harbour View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harbour View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Harbour View Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Joan Street: 50 km/h (proposed 30 km/h)</li> <li>Raymond Street: 50 km/h (proposed 30 km/h)</li> <li>Edith Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Harbour View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.55. For urban areas this corresponds to an IRR band of **Low**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harbour View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harbour View Road (Leigh)

The speed limit on Harbour View Road, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harbour View Road connects to Ferndale Avenue to the west and Hill Street to the south. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Harbour View Road is classified as an Access road under the one network road classification (ONRC). Harbour View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harbour View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as “ <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Harbour View Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ferndale Avenue: 50km/h (proposed 30km/h)</li> <li>Hill Street: 50km/h (proposed 30km/h)</li> <li>Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> <li>Kowhai Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Harbour View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harbour View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harkin Close (Albany)

The speed limit on Harkin Close, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harkin Close connects to Roanoke Way to the east. This road provides access to residential properties and is approximately 0.50km in length.</p> <p>Harkin Close is classified as a Access road under the one network road classification (ONRC). Harkin Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harkin Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Harkin Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Roanoke Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Harkin Close has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harkin Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harmony Avenue (Otahuhu)

The speed limit on Harmony Avenue, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harmony Avenue connects to Water Street to the north and Melody Lane to the west. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Harmony Avenue is classified as an Access road under the one network road classification (ONRC). Harmony Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harmony Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 369 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Harmony Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Water Street: 50km/h (proposed 30km/h)</li> <li>Melody Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Harmony Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harmony Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Harobed Place (Weymouth)**

The speed limit on Harobed Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harobed Place connects to Etherton Drive to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Harobed Place is classified as an Access road under the one network road classification (ONRC). Harobed Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harobed Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Harobed Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Harobed Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harobed Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harrington Road (Henderson)

The speed limit on Harrington Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harrington Road connects to Rathgar Road to the east and Mawney Road to the south. This road provides access to residential properties and is approximately 0.84km in length.</p> <p>Harrington Road is classified as a Secondary Collector road under the one network road classification (ONRC). Harrington Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: two minor crashes, one non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harrington Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1599 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Harrington Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> <li>Mawney Road: 50km/h (proposed 30km/h)</li> <li>Ascot Avenue: 50km/h (proposed 30km/h)</li> <li>Harry Ward Place: 50km/h (proposed 30km/h)</li> <li>Zodiac Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Harrington Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.84. For urban areas this corresponds to an IRR band of **High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harrington Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harrison Avenue (Belmont)

The speed limit on Harrison Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harrison Avenue connects to Westwell Road to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Harrison Avenue is classified as an Access road under the one network road classification (ONRC). Harrison Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harrison Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Harrison Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Westwell Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Harrison Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harrison Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harry Ward Place (Henderson)

The speed limit on Harry Ward Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harry Ward Place connects to Harrington Road to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Harry Ward Place is classified as an Access road under the one network road classification (ONRC). Harry Ward Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harry Ward Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 113 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Harry Ward Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Harrington Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Harry Ward Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harry Ward Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Harwell Place (Mangere)

The speed limit on Harwell Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Harwell Place connects to Killington Crescent to the north. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Harwell Place is classified as an Access road under the one network road classification (ONRC). Harwell Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Harwell Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Harwell Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Killington Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Harwell Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Harwell Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hastings Parade (Devonport)

The speed limit on Hastings Parade, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hastings Parade connects to Victoria Road to the east and Shoal Bay Road to the west. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Hastings Parade is classified as an Access road under the one network road classification (ONRC). Hastings Parade is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hastings Parade were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 560 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hastings Parade has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Victoria Road between Albert Road and northern end of Victoria Road: 50 km/h (proposed 30 km/h)</li> <li>Shoal Bay Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hastings Parade has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hastings Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hatherley Place (Clendon Park)

The speed limit on Hatherley Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hatherley Place connects to Kennington Drive to the west. This road provides access to residential properties and is approximately 0.43km in length.</p> <p>Hatherley Place is classified as an Access road under the one network road classification (ONRC). Hatherley Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hatherley Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 499 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hatherley Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kennington Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hatherley Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hatherley Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Haultain Street (Mount Eden)

The speed limit on Haultain Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Haultain Street connects to Wynyard Road to the east. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Haultain Street is classified as a Access road under the one network road classification (ONRC). Haultain Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Haultain Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Commercial big box/industrial as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Haultain Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wynyard Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Haultain Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.19. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Haultain Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hauraki Road (Leigh)

The speed limit on Hauraki Road, Leigh, between Wonderview Road and north of Hauraki Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hauraki Road connects to Ferndale Avenue to the north and Leigh Road to the south. This road provides access to residential properties and is approximately 1.17km in length.</p> <p>Hauraki Road is classified as a Primary Collector road under the one network road classification (ONRC). Hauraki Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hauraki Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1599 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hauraki Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ferndale Avenue: 50km/h (proposed 30km/h)</li> <li>Leigh Road: 50km/h (no proposed change)</li> <li>Wonderview Road: 50km/h (proposed 30km/h)</li> <li>Totara Road: 50km/h (proposed 30km/h)</li> <li>Cumberland Street: 50km/h (proposed 30km/h)</li> <li>Harbour View Road: 50km/h (proposed 30km/h)</li> <li>Seatoun Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hauraki Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.43. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hauraki Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Hauraki Road is a Primary Collector Road, that is not the intended function of this section of Hauraki Road

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Hawea Road (Point Chevalier)**

The speed limit on Hawea Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hawea Road connects to Walker Road to the north and Smale Street to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Hawea Road is classified as an Access road under the one network road classification (ONRC). Hawea Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hawea Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hawea Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Walker Road: 50 km/h (proposed 30 km/h)</li> <li>Smale Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hawea Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hawea Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hayfield Way (Karaka)

The speed limit on Hayfield Way, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hayfield Way connects to Oakland Road to the north and Fort Lincoln Loop to the south. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Hayfield Way is classified as a Secondary Collector road under the one network road classification (ONRC). Hayfield Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hayfield Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1591 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hayfield Way has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Oakland Road: 50km/h (no proposed change)</li> <li>Fort Lincoln Loop: 50km/h (proposed 30km/h)</li> <li>Tumu Road: 50km/h (proposed 30km/h)</li> <li>Melody Belle Street: 50km/h (proposed 30km/h)</li> <li>Vespa Road: 50km/h (proposed 30km/h)</li> <li>Toporoa Street: 50km/h (proposed 30km/h)</li> <li>Songline Road: 50km/h (proposed 30km/h)</li> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> <li>Te Ipukai Drive: 50km/h (proposed 30km/h)</li> <li>Patakatuna Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hayfield Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Hayfield Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hazards Road (Weymouth)

The speed limit on Hazards Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hazards Road connects to Weymouth Road to the west and McInnes Road to the west. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Hazards Road is classified as an Access road under the one network road classification (ONRC). Hazards Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hazards Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 410 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hazards Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> <li>• McInnes Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hazards Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hazards Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Heidi Crescent (Flat Bush)

The speed limit on Heidi Crescent, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Heidi Crescent connects to Kensway Drive to the west and Plantation Avenue to the south. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Heidi Crescent is classified as an Access road under the one network road classification (ONRC). Heidi Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Heidi Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Heidi Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kensway Drive: 50km/h (proposed 30km/h)</li> <li>Plantation Avenue: 50km/h (proposed 30km/h)</li> <li>Dione Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Heidi Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Heidi Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hemi Street (Narrow Neck)

The speed limit on Hemi Street, Narrow Neck has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hemi Street connects to Old Lake Road to the south. This road provides access to residential properties and is approximately 0.28km in length.</p> <p>Hemi Street is classified as an Access road under the one network road classification (ONRC). Hemi Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hemi Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 270 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hemi Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Old Lake Road: 50km/h (no proposed change)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hemi Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hemi Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hemopo Street (Pukekohe)

The speed limit on Hemopo Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hemopo Street connects to Adams Road South to the west and Te Manaki Street to the east. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Hemopo Street is classified as an Access road under the one network road classification (ONRC). Hemopo Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hemopo Street were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hemopo Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Adams Road South: 100 km/h (proposed 30 km/h)</li> <li>Te Manaki Street: 50 km/h (proposed 30 km/h)</li> <li>Koropupu Street: 50 km/h (proposed 30 km/h)</li> <li>Raki Street: 50 km/h (proposed 30 km/h)</li> <li>Kapia Street: 50 km/h (proposed 30 km/h)</li> <li>Taikaranga Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hemopo Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hemopo Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hendry Avenue (Hillsborough)

The speed limit on Hendry Avenue, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hendry Avenue connects to Queenstown Road to the east and Kelsey Crescent to the west. This road provides access to residential properties and is approximately 0.90km in length.</p> <p>Hendry Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Hendry Avenue is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Winding</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 943 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hendry Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Queenstown Road: 50km/h (no proposed change)</li> <li>• Stephen Lysnar Place: 50km/h (proposed 30km/h)</li> <li>• Kelsey Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hendry Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.37. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hendry Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Henry Curd Terrace (Pukekohe)

The speed limit on Henry Curd Terrace, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Henry Curd Terrace connects to Queen Street to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Henry Curd Terrace is classified as an Access road under the one network road classification (ONRC). Henry Curd Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Henry Curd Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Henry Curd Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Queen Street: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Henry Curd Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Henry Curd Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Henry Partington Place (Greenhithe)

The speed limit on Henry Partington Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Henry Partington Place connects to William Gamble Drive to the west. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Henry Partington Place is classified as a Secondary Collector road under the one network road classification (ONRC). Henry Partington Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Henry Partington Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Henry Partington Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• William Gamble Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Henry Partington Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Henry Partington Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Herald Place (Otara)

The speed limit on Herald Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Herald Place connects to Sandbrook Avenue to the west. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Herald Place is classified as an Access road under the one network road classification (ONRC). Herald Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Herald Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Herald Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sandbrook Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Herald Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Herald Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Heyford Close (Mangere)

The speed limit on Heyford Close, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Heyford Close connects to Mascot Avenue to the west. This road provides access to residential properties and is approximately 0.64km in length.</p> <p>Heyford Close is classified as a Secondary Collector road under the one network road classification (ONRC). Heyford Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: two minor crashes, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Heyford Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1216 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Heyford Close has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mascot Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Heyford Close has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.11. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Heyford Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hibernian Drive (Ranui)

The speed limit on Hibernian Drive, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hibernian Drive connects to Dunbarton Drive to the north and Craiburn Street to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Hibernian Drive is classified as an Access road under the one network road classification (ONRC). Hibernian Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hibernian Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hibernian Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Dunbarton Drive: 50km/h (proposed 30km/h)</li> <li>Craiburn Street: 50km/h (proposed 30km/h)</li> <li>Drummond Drive: 50km/h (proposed 30km/h)</li> <li>Kilmarnock Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hibernian Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hibernian Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hibiscus Drive (Orewa)

The speed limit on Hibiscus Drive, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hibiscus Drive connects to Eaves Bush Parade to the north and Puriri Boulevard to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Hibiscus Drive is classified as an Access road under the one network road classification (ONRC). Hibiscus Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hibiscus Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hibiscus Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Eaves Bush Parade: 50km/h (proposed 30km/h)</li> <li>Puriri Boulevard: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hibiscus Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hibiscus Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – High Street (Devonport)

The speed limit on High Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>High Street connects to Hastings Parade to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>High Street is classified as an Access road under the one network road classification (ONRC). High Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for High Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 560 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of High Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hastings Parade: 50 km/h (proposed 30 km/h)</li> <li>Calliope Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps High Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for High Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – High Street (Otahuhu)

The speed limit on High Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>High Street connects to Water Street to the east and Atkinson Avenue to the west. This road provides access to residential properties and is approximately 0.51km in length.</p> <p>High Street is classified as a Secondary Collector road under the one network road classification (ONRC). High Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one serious crash, two non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for High Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5057 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of High Street has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Water Street: 50km/h (proposed 30km/h)</li> <li>• Atkinson Avenue: 50km/h (no proposed change)</li> <li>• Great south Road: 50km/h (no proposed change)</li> <li>• Jack Browne Place: 50km/h (proposed 30km/h)</li> <li>• Hutton Street between Princes Street and Fairburn Road: 50km/h (proposed 30km/h)</li> <li>• Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps High Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for High Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Highlight Parade (Te Atatu South)

The speed limit on Highlight Parade, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Highlight Parade connects to Jaemont Avenue to the south. This road provides access to residential properties and is approximately 0.15 km in length.</p> <p>Highlight Parade is classified as an access road under the one network road classification (ONRC). Highlight Parade is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Highlight Parade has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jaemont Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Highlight Parade has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.46 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Highlight Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hill Street (Leigh)

The speed limit on Hill Street, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hill Street connects to Harbour View Road to the north and Cotterell Street to the south. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Hill Street is classified as an Access road under the one network road classification (ONRC). Hill Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hill Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hill Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Harbour View Road: 50km/h (proposed 30km/h)</li> <li>• Cotterell Street: 50km/h (proposed 30km/h)</li> <li>• Totara Road: 50km/h (proposed 30km/h)</li> <li>• Cumberland Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hill Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hill Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hillman Place (Ranui)

The speed limit on Hillman Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hillman Place connects to Karepo Crescent to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Hillman Place is classified as an Access road under the one network road classification (ONRC). Hillman Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hillman Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 413 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hillman Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Karepo Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hillman Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hillman Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hills Road (Otara)

The speed limit on Hills Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hills Road connects to Johnstones Road to the north and East Tamaki Road to the south. This road provides access to residential properties and is approximately 0.98km in length.</p> <p>Hills Road is classified as an Access road under the one network road classification (ONRC). Hills Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eleven crashes between 2016 and 2020. Two minor and nine non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hills Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4747 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hills Road has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Berrett Place: 50km/h (proposed 30km/h)</li> <li>• Grant Avenue: 50km/h (proposed 30km/h)</li> <li>• Williams Crescent: 50km/h (proposed 30km/h)</li> <li>• Velvet Crescent: 50km/h (proposed 30km/h)</li> <li>• Gubb Place: 50km/h (proposed 30km/h)</li> <li>• Hamill Road: 50km/h (proposed 30km/h)</li> <li>• Carey Place: 50km/h (proposed 30km/h)</li> <li>• Grundy Place: 50km/h (proposed 30km/h)</li> <li>• East Tamaki Road: 60km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hills Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hills Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hinekohu Street (Kelston)

The speed limit on Hinekohu Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hinekohu Street connects to Miro Street to the north and Rewa Street to the west. This road provides access to residential properties and is approximately 0.28km in length.</p> <p>Hinekohu Street is classified as a Secondary Collector road under the one network road classification (ONRC). Hinekohu Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hinekohu Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 165 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hinekohu Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Miro Street: 50km/h (proposed 30km/h)</li> <li>Rewa Street: 50km/h (proposed 30km/h)</li> <li>Rimu Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hinekohu Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hinekohu Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hinton Place (Weymouth)

The speed limit on Hinton Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hinton Place connects to Becker Drive to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Hinton Place is classified as an Access road under the one network road classification (ONRC). Hinton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hinton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hinton Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hinton Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hinton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hitori Street (Weymouth)

The speed limit on Hitori Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hitori Street connects to Ipukarea Street to the north and Kaimoana Street to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Hitori Street is classified as an Access road under the one network road classification (ONRC). Hitori Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hitori Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hitori Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ipukarea Street: 50km/h (proposed 30km/h)</li> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hitori Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hitori Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hochstetter Place (Stonefields)

The speed limit on Hochstetter Place, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hochstetter Place connects to Korere Terrace to the north. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Hochstetter Place is classified as an Access road under the one network road classification (ONRC). Hochstetter Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hochstetter Place were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hochstetter Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Korere Terrace: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hochstetter Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hochstetter Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hoiho Road (Pukekohe)

The speed limit on Hoiho Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hoiho Road connects to Jutland Road to the west and Piripono Crescent to the east. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Hoiho Road is classified as an Access road under the one network road classification (ONRC). Hoiho Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hoiho Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hoiho Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jutland Road: 50km/h (proposed 30km/h)</li> <li>Piripono Crescent: 50km/h (proposed 30km/h)</li> <li>Pinto Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hoiho Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hoiho Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hokioi Street (Karaka)

The speed limit on Hokioi Street, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hokioi Street connects to Karera Road to the north. This road provides access to residential properties and is approximately 0.03km in length.</p> <p>Hokioi Street is classified as an Access road under the one network road classification (ONRC). Hokioi Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hokioi Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hokioi Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Karera Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hokioi Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hokioi Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Honey Place (Weymouth)

The speed limit on Honey Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Honey Place connects to Gibbons Road to the north. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Honey Place is classified as an Access road under the one network road classification (ONRC). Honey Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Honey Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Honey Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Honey Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Honey Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hooten Place (Oteha)

The speed limit on Hooten Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hooten Place connects to Fernhill Way to the north and Pocock Lane to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Hooten Place is classified as an Access road under the one network road classification (ONRC). Hooten Place is a two-way, Two lane undivided road. There are pedestrian amenities and partial on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hooten Place were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hooten Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> <li>Pocock Lane: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hooten Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hooten Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Horizon View Road (Oteha)

The speed limit on Horizon View Road, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Horizon View Road connects to Fields Parade to the west. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Horizon View Road is classified as a Primary Collector road under the one network road classification (ONRC). Horizon View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Horizon View Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Horizon View Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fields Parade: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Horizon View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Horizon View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Horoeaka Avenue (Mount Eden)

The speed limit on Horoeaka Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Horoeaka Avenue connects to View Road to the north and Valley Road to the south. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Horoeaka Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Horoeaka Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Horoeaka Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2429 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Horoeoka Avenue has a mean operating speed in the range of 30-34km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• View Road: 50km/h (proposed 30km/h)</li> <li>• Bellevue Road: 50km/h (proposed 30km/h)</li> <li>• Valley Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Horoeoka Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Horoeoka Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Horopito Street (Mount Eden)

The speed limit on Horopito Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Horopito Street connects to Dominion Road to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Horopito Street is classified as a Access road under the one network road classification (ONRC). Horopito Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Horopito Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Horopito Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dominion Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Horopito Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Horopito Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hoskins Avenue (Hillsborough)

The speed limit on Hoskins Avenue, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hoskins Avenue connects to Foote Street to the east. This road provides access to residential properties and is approximately 0.62km in length.</p> <p>Hoskins Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Hoskins Avenue is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 524 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hoskins Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Foote Street: 50km/h (proposed 30km/h)</li> <li>• Frederick Street: 50km/h (proposed 30km/h)</li> <li>• Bagley Street: 50km/h (proposed 30km/h)</li> <li>• Filgate Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hoskins Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hoskins Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – House Avenue (Mangere Bridge)

The speed limit on House Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>House Avenue connects to Kiwi Esplanade to the north and Muir Avenue to the south. This road provides access to residential properties and is approximately 0.61km in length.</p> <p>House Avenue is classified as an Access road under the one network road classification (ONRC). House Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for House Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 462 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of House Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> <li>Watervista Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps House Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for House Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Huamanu Street (Pukekohe)

The speed limit on Huamanu Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huamanu Street connects to Adams Road South to the west and Te Manaki Street to the east. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Huamanu Street is classified as an Access road under the one network road classification (ONRC). Huamanu Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huamanu Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Huamanu Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Adams Road South: 100km/h (proposed 30km/h)</li> <li>• Te Manaki Street: 50km/h (proposed 30km/h)</li> <li>• Raki Street: 50km/h (proposed 30km/h)</li> <li>• Marire Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Huamanu Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Huamanu Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Huber Street (Weymouth)

The speed limit on Huber Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huber Street connects to Gibbons Road to the north and Waimai Avenue to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Huber Street is classified as an Access road under the one network road classification (ONRC). Huber Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huber Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 291 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Huber Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> <li>Waimai Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Huber Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Huber Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hughdene Place (Henderson)

The speed limit on Hughdene Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hughdene Place connects to Glen Norman Avenue to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Hughdene Place is classified as a Access road under the one network road classification (ONRC). Hughdene Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hughdene Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hughdene Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Glen Norman Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hughdene Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hughdene Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Humariri Street (Point Chevalier)

The speed limit on Humariri Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Humariri Street connects to Point Chevalier Road to the east and Wilson Carlile Street to the west. This road provides access to residential properties and is approximately 0.28km in length.</p> <p>Humariri Street is classified as an Access road under the one network road classification (ONRC). Humariri Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Humariri Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Humariri Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Wilson Carlile Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Humariri Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Humariri Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Humphreys Place (Mangere)

The speed limit on Humphreys Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Humphreys Place connects to Ashgrove Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Humphreys Place is classified as an Access road under the one network road classification (ONRC). Humphreys Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Humphreys Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Humphreys Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ashgrove Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Humphreys Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Humphreys Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Huntington Park Drive (Greenhithe)

The speed limit on Huntington Park Drive, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huntington Park Drive connects to Kyle Road to the west. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Huntington Park Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Huntington Park Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huntington Park Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Huntington Park Drive has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kyle Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Huntington Park Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.00. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Huntington Park Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hurley Place (Kelston)

The speed limit on Hurley Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hurley Place connects to Daphne Street to the west and Laura Street to the south. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Hurley Place is classified as an Access road under the one network road classification (ONRC). Hurley Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hurley Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hurley Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Daphne Street: 50km/h (proposed 30km/h)</li> <li>Laura Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hurley Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hurley Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hutton Street (Otahuhu)

The speed limit on Hutton Street, Otahuhu, between Princes Street and Fairburn Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hutton Street connects to Princes Street to the north and Fairburn Road to the south. This road provides access to residential properties and is approximately 1.09km in length.</p> <p>Hutton Street is classified as a Secondary Collector road under the one network road classification (ONRC). Hutton Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hutton Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1081 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hutton Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Princes Street: 50km/h (no proposed change)</li> <li>• Fairburn Road: 50km/h (proposed 30km/h)</li> <li>• Avenue Road between Atkinson Avenue and the eastern end of Atkinson Avenue: 50km/h (proposed 30km/h)</li> <li>• High Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Hutton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hutton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hyde Street (Manurewa East)

The speed limit on Hyde Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hyde Street connects to Fleming Street to the west. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Hyde Street is classified as an Access road under the one network road classification (ONRC). Hyde Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hyde Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 400 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Hyde Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fleming Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Hyde Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hyde Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ilford Crescent (Mangere)

The speed limit on Ilford Crescent, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ilford Crescent connects to Kenton Lane to the north and Ashgrove Road to the west. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Ilford Crescent is classified as an Access road under the one network road classification (ONRC). Ilford Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ilford Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ilford Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kenton Lane: 50km/h (proposed 30km/h)</li> <li>• Ashgrove Road: 50km/h (proposed 30km/h)</li> <li>• Kelburn Lane: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ilford Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ilford Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Imrie Avenue (Mangere)

The speed limit on Imrie Avenue, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Imrie Avenue connects to Massey Road to the east and Friesian Drive to the west. This road provides access to residential properties and is approximately 0.65km in length.</p> <p>Imrie Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Imrie Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Imrie Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2012 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Imrie Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Massey Road: 50km/h (no proposed change)</li> <li>Friesian Drive: 50km/h (proposed 30km/h)</li> <li>Tranent Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Imrie Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Imrie Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ingleby Place (Kelston)

The speed limit on Ingleby Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ingleby Place connects to Cobham Crescent to the west. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Ingleby Place is classified as an Access road under the one network road classification (ONRC). Ingleby Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ingleby Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ingleby Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ingleby Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ingleby Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ingram Crescent (Otara)

The speed limit on Ingram Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ingram Crescent connects to Bairds Road to the south. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Ingram Crescent is classified as an Access road under the one network road classification (ONRC). Ingram Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ingram Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 187 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ingram Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ingram Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ingram Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ipukarea Street (Weymouth)

The speed limit on Ipukarea Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ipukarea Street connects to Leaver Place to the north and Kaimoana Street to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Ipukarea Street is classified as an Access road under the one network road classification (ONRC). Ipukarea Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ipukarea Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ipukarea Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Leaver Place: 50km/h (proposed 30km/h)</li> <li>• Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>• Kuurae Crescent: 50km/h (proposed 30km/h)</li> <li>• Apa Street: 50km/h (proposed 30km/h)</li> <li>• Hitori Street: 50km/h (proposed 30km/h)</li> <li>• Taiaapure Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ipukarea Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ipukarea Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ivon Road (Otara)

The speed limit on Ivon Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ivon Road connects to Capstick Road to the north and Ferguson Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Ivon Road is classified as an Access road under the one network road classification (ONRC). Ivon Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ivon Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ivon Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Capstick Road: 50km/h (proposed 30km/h)</li> <li>Ferguson Road: 50km/h (proposed 30km/h)</li> <li>Sandra Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ivon Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ivon Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jacaranda Court (Pukekohe)

The speed limit on Jacaranda Court, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jacaranda Court connects to Wellington Street to the east. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Jacaranda Court is classified as an Access road under the one network road classification (ONRC). Jacaranda Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jacaranda Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jacaranda Court has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Wellington Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Jacaranda Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jacaranda Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jack Browne Place (Otahuhu)

The speed limit on Jack Browne Place, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jack Browne Place connects to High Street to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Jack Browne Place is classified as an Access road under the one network road classification (ONRC). Jack Browne Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jack Browne Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jack Browne Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>High Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jack Browne Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jack Browne Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jack Clark Way (Point Chevalier)

The speed limit on Jack Clark Way, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jack Clark Way connects to St Francis Crescent to the south and Wilson Carlile Street to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Jack Clark Way is classified as an Access road under the one network road classification (ONRC). Jack Clark Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jack Clark Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jack Clark Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• St Francis Crescent: 50 km/h (proposed 30 km/h)</li> <li>• Wilson Carlile Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Jack Clark Way has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jack Clark Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jaemont Avenue (Te Atatu South)

The speed limit on Jaemont Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jaemont Avenue connects to Te Atatu Road to the west. This road provides access to residential properties and is approximately 0.80 km in length.</p> <p>Jaemont Avenue is classified as a secondary collector road under the one network road classification (ONRC). Jaemont Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one serious injury, two minor injury, and two non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 698 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jaemont Avenue has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Te Atatu Road: 50 km/h</li> <li>Sunrise Lane: 50 km/h (proposed 30 km/h)</li> <li>Highlight Parade: 50 km/h (proposed 30 km/h)</li> <li>Merchant Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jaemont Avenue has the following information:

- Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**
- The Infrastructure Risk Rating Score is 2.46 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Jaemont Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Jan Place (Pakuranga)**

The speed limit on Jan Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jan Place connects to Tiraumea Drive to the north and Aurea Avenue to the south. This road provides access to residential properties and is approximately 0.10 km in length.</p> <p>Jan Place is classified as a secondary collector road under the one network road classification (ONRC). Jan Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ intersections per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1591 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jan Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> <li>• Aurea Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Jan Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.58 For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Jan Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Janese Place (Weymouth)

The speed limit on Janese Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Janese Place connects to Etherton Drive to the west. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Janese Place is classified as an Access road under the one network road classification (ONRC). Janese Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Janese Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Janese Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Janese Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Janese Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Janway Avenue (Flat Bush)

The speed limit on Janway Avenue, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Janway Avenue connects to Kensway Drive to the east and Kestev Drive to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Janway Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Janway Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Janway Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1258 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Janway Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kensway Drive: 50km/h (proposed 30km/h)</li> <li>• Kestev Drive: 50km/h (proposed 30km/h)</li> <li>• Lorenzo Way: 50km/h (proposed 30km/h)</li> <li>• Bezar Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Janway Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Janway Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jenkins Place (Manurewa East)

The speed limit on Jenkins Place, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jenkins Place connects to Sterling Avenue to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Jenkins Place is classified as an Access road under the one network road classification (ONRC). Jenkins Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jenkins Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 748 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jenkins Place has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sterling Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jenkins Place has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jenkins Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jim Titchener Parade (Devonport)

The speed limit on Jim Titchener Parade, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jim Titchener Parade connects to Mozeley Avenue to the east and Ewen Alison Avenue to the south. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Jim Titchener Parade is classified as a Secondary Collector road under the one network road classification (ONRC). Jim Titchener Parade is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jim Titchener Parade were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as commercial big box/Industrial using MegaMaps tool. The IRR defines commercial big box/Industrial as " <i>large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1206 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jim Titchener Parade has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mozeley Avenue: 50km/h (proposed 30km/h)</li> <li>• Ewen Alison Avenue: 50km/h (proposed 30km/h)</li> <li>• Patuone Avenue: 50km/h (proposed 30km/h)</li> <li>• Patuone Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Jim Titchener Parade has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.02. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Jim Titchener Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Joan Street (Point Chevalier)

The speed limit on Joan Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Joan Street connects to Harbour View Road to the west and Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Joan Street is classified as an Access road under the one network road classification (ONRC). Joan Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Joan Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Joan Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Harbour View Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Joan Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.55. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Joan Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – John Gill Road (Cockle Bay)**

The speed limit on John Gill Road, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>John Gill Road connects to Churchill Road to the north and Sandspit Road to the south. This road provides access to residential properties and is approximately 0.91 km in length.</p> <p>John Gill Road is classified as a secondary collector road under the one network road classification (ONRC). John Gill Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one serious and one minor injury crash. This resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 508 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of John Gill Road has a mean operating speed in the range of 30-34 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Sandspit Road: 50 km/h</li> <li>• Churchill Road: 50 km/h</li> <li>• Trident Place: 50 km/h (proposed 30 km/h)</li> <li>• Cyclades Place: 50 km/h (proposed 30 km/h)</li> <li>• Sunnyview Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Aries Place: 50 km/h (proposed 30 km/h)</li> <li>• Clipper Place: 50 km/h (proposed 30 km/h)</li> <li>• Advene Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps John Gill Road has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium High**
- o The Infrastructure Risk Rating Score is 2.44 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for John Gill Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – John Jennings Drive (Oteha)

The speed limit on John Jennings Drive, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>John Jennings Drive connects to Fields Parade to the east and Canyon Drive to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>John Jennings Drive is classified as an Access road under the one network road classification (ONRC). John Jennings Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for John Jennings Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of John Jennings Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fields Parade: 50km/h (proposed 30km/h)</li> <li>Canyon Drive: 50km/h (proposed 30km/h)</li> <li>Andersons Road: 50km/h (proposed 30km/h)</li> <li>Ravine Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps John Jennings Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for John Jennings Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Johnstone Street (Point Chevalier)

The speed limit on Johnstone Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Johnstone Street connects to Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Johnstone Street is classified as an Access road under the one network road classification (ONRC). Johnstone Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Johnstone Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Johnstone Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>• Bungalow Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Bangor Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Johnstone Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Johnstone Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Johnstones Road (Otago)

The speed limit on Johnstones Road, Otago has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Johnstones Road connects to Springs Road to the east. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Johnstones Road is classified as a Secondary Collector road under the one network road classification (ONRC). Johnstones Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: two minor and five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Johnstones Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1915 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Johnstones Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tyrone Street: 50km/h (proposed 30km/h)</li> <li>Hills Road: 50km/h (proposed 30km/h)</li> <li>Hamill Road: 50km/h (proposed 30km/h)</li> <li>Pearl Baker Drive: 50km/h (proposed 30km/h)</li> <li>Clarkson Crescent: 50km/h (proposed 30km/h)</li> <li>Lester Lane: 50km/h (proposed 30km/h)</li> <li>Largo Lane: 50km/h (proposed 30km/h)</li> <li>Eileen Lane: 50km/h (proposed 30km/h)</li> <li>Springs Road: 60km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Johnstones Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Johnstones Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jolson Road (Mt Wellington)

The speed limit on Jolson Road, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jolson Road connects to Panama Road to the west and Tuapapa Way to the south. This road provides access to residential properties and is approximately 0.61km in length.</p> <p>Jolson Road is classified as a Secondary Collector road under the one network road classification (ONRC). Jolson Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jolson Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1352 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Jolson Road has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Panama Road: 50km/h (proposed 30km/h)</li> <li>• Tuapapa Way: 50km/h (proposed 30km/h)</li> <li>• Runa Place: 50km/h (proposed 30km/h)</li> <li>• Bernard Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Jolson Road has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.55. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jolson Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jordan Road (Mangere)

The speed limit on Jordan Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jordan Road connects to Thomas Road to the east and Kirkbride Road to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Jordan Road is classified as a Primary Collector road under the one network road classification (ONRC). Jordan Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jordan Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3754 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jordan Road has a mean operating speed in the range of 33km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Thomas Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jordan Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Jordan Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Jordan Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Joshua Place (Weymouth)

The speed limit on Joshua Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Joshua Place connects to Becker Drive to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Joshua Place is classified as an Access road under the one network road classification (ONRC). Joshua Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Joshua Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Joshua Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Joshua Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Joshua Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Judge Street (Parnell)

The speed limit on Judge Street, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Judge Street connects to Saint Stephens Avenue to the east. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Judge Street is classified as an Access road under the one network road classification (ONRC). Judge Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Judge Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Judge Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Saint Stephens Avenue between Gladstone Road and the northern end of Saint Stephens Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Judge Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Judge Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Judges Bay Road (Parnell)

The speed limit on Judges Bay Road, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Judges Bay Road connects to Gladstone Road to the east and Bridgewater Road to the west. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Judges Bay Road is classified as an Access road under the one network road classification (ONRC). Judges Bay Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Judges Bay Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Judges Bay Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Gladstone Road: 50km/h (no proposed change)</li> <li>• Bridgewater Road: 50km/h (proposed 30km/h)</li> <li>• Taurarua Terrace: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Judges Bay Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Judges Bay Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Judith Anne Drive (Pukekohe)

The speed limit on Judith Anne Drive, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Judith Anne Drive connects to Green Lane to the west. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Judith Anne Drive is classified as an Access road under the one network road classification (ONRC). Judith Anne Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Judith Anne Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Judith Anne Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Green Lane: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Judith Anne Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Judith Anne Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Judkins Crescent (Cockle Bay)

The speed limit on Judkins Crescent, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Judkins Crescent connects to Advene Road to the south. This road provides access to residential properties and is approximately 0.48 km in length.</p> <p>Judkins Crescent is classified as an access road under the one network road classification (ONRC). Judkins Crescent is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 291 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Judkins Crescent has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Advene Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Judkins Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.17 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Judkins Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jukes Place (Otara)

The speed limit on Jukes Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jukes Place connects to Bairds Road to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Jukes Place is classified as an Access road under the one network road classification (ONRC). Jukes Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jukes Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jukes Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jukes Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jukes Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Justamere Place (Weymouth)

The speed limit on Justamere Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Justamere Place connects to Waimahia Avenue to the south. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Justamere Place is classified as an Access road under the one network road classification (ONRC). Justamere Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Justamere Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 210 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Justamere Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waimahia Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Justamere Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Justamere Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Jutland Road (Pukekohe)

The speed limit on Jutland Road, Pukekohe, between Victoria Street West and the northern end of Jutland Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jutland Road connects to Belmont Road to the south. This road provides access to residential properties and is approximately 0.91km in length.</p> <p>Jutland Road is classified as an Access road under the one network road classification (ONRC). Jutland Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jutland Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jutland Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Belmont Road: 50km/h (proposed 30km/h)</li> <li>Taikaranga Street: 50km/h (proposed 30km/h)</li> <li>Princes Street West: 50km/h (proposed 30km/h)</li> <li>Tawhiti Road: 50km/h (proposed 30km/h)</li> <li>Raoriki Road: 50km/h (proposed 30km/h)</li> <li>Piripono Crescent: 50km/h (proposed 30km/h)</li> <li>Hoiho Road: 50km/h (proposed 30km/h)</li> <li>Victoria Street West: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Jutland Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Jutland Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kaakahoa Road (Karaka)

The speed limit on Kaakahoa Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kaakahoa Road connects to Pataka Close to the south. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Kaakahoa Road is classified as an Access road under the one network road classification (ONRC). Kaakahoa Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kaakahoa Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kaakahoa Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pataka Close: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kaakahoa Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kaakahoa Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kaimoana Street (Weymouth)

The speed limit on Kaimoana Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kaimoana Street connects to Ipukarea Street to the north and Waimahia Avenue to the south. This road provides access to residential properties and is approximately 0.81km in length.</p> <p>Kaimoana Street is classified as an Access road under the one network road classification (ONRC). Kaimoana Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kaimoana Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kaimoana Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ipukarea Street: 50km/h (proposed 30km/h)</li> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>Hitori Street: 50km/h (proposed 30km/h)</li> <li>Kuparu Street: 50km/h (proposed 30km/h)</li> <li>Tonuitanga Street: 50km/h (proposed 30km/h)</li> <li>Becker Drive: 50km/h (proposed 30km/h)</li> <li>Taiaapure Street: 50km/h (proposed 30km/h)</li> <li>Tutuwhatu Crescent: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kaimoana Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kaimoana Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kalmia Street (Eilerslie)

The speed limit on Kalmia Street, Eilerslie has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kalmia Street connects to Main Highway to the north and Great South Road to the south. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Kalmia Street is classified as a Primary collector road under the one network road classification (ONRC). Kalmia Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: two minor and four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kalmia Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and Very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Urban Residential as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6745 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kalmia Street has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Sultan Street: 50km/h (proposed 30km/h)</li> <li>• Stanway Place: 50km/h (proposed 30km/h)</li> <li>• Main Highway: 50km/h (no proposed change)</li> <li>• Great South Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kalmia Street has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kalmia Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kamahi Street (Mount Eden)

The speed limit on Kamahi Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kamahi Street connects to Leamington Road to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Kamahi Street is classified as a Access road under the one network road classification (ONRC). Kamahi Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kamahi Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kamahi Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Leamington Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kamahi Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kamahi Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kapia Street (Pukekohe)

The speed limit on Kapia Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kapia Street connects to Tawhiti Road to the north and Hempopo Street to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Kapia Street is classified as an Access road under the one network road classification (ONRC). Kapia Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kapia Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kapia Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tawhiti Road: 50km/h (proposed 30km/h)</li> <li>Hempopo Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kapia Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kapia Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Karaka Street (Kelston)

The speed limit on Karaka Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Karaka Street connects to Rimu Street to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Karaka Street is classified as an Access road under the one network road classification (ONRC). Karaka Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Karaka Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Karaka Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rimu Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Karaka Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Karaka Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kare Ariki Place (Pukekohe)

The speed limit on Kare Ariki Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kare Ariki Place connects to Te Manaki Street to the west and Matikao Place to the east. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Kare Ariki Place is classified as an Access road under the one network road classification (ONRC). Kare Ariki Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kare Ariki Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kare Ariki Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Te Manaki Street: 50km/h (proposed 30km/h)</li> <li>• Matikao Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kare Ariki Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kare Ariki Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Karepo Crescent (Ranui)

The speed limit on Karepo Crescent, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Karepo Crescent connects to Glen Road to the east and Waitemata Drive to the west. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Karepo Crescent is classified as an Access road under the one network road classification (ONRC). Karepo Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Karepo Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 413 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Karepo Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Glen Road: 50km/h (proposed 30km/h)</li> <li>Waitemata Drive between Luanda Drive and the northern end of Waitemata Drive: 50km/h (proposed 30km/h)</li> <li>Hillman Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Karepo Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Karepo Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Karera Road (Karaka)**

The speed limit on Karera Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Karera Road connects to Oakland Road to the north and Mataitai Way to the south. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Karera Road is classified as an Access road under the one network road classification (ONRC). Karera Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Karera Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Karera Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Oakland Road: 50km/h (no proposed change)</li> <li>• Mataitai Way: 50km/h (proposed 30km/h)</li> <li>• Hokioi Street: 50km/h (proposed 30km/h)</li> <li>• Pataka Close: 50km/h (proposed 30km/h)</li> <li>• Peketua Street: 50km/h (proposed 30km/h)</li> <li>• Tuarongo Road: 50km/h (proposed 30km/h)</li> <li>• Patakatuna Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Karera Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Karera Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Karson Place (Flat Bush)

The speed limit on Karson Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Karson Place connects to Cyril French Drive to the south and Oswald Close to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Karson Place is classified as an Access road under the one network road classification (ONRC). Karson Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Karson Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Karson Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> <li>Oswald Close: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Karson Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Karson Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Katoa Street (Point Chevalier)

The speed limit on Katoa Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Katoa Street connects to Huamariri Street to the north and Target Street to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Katoa Street is classified as an Access road under the one network road classification (ONRC). Katoa Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Katoa Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Katoa Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Humariri Street: 50 km/h (proposed 30 km/h)</li> <li>• Target Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Katoa Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Katoa Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kauriki Terrace (Stonefields)

The speed limit on Kauriki Terrace, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kauriki Terrace connects to Stonefields Avenue to the north and Tihi Street to the east. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Kauriki Terrace is classified as an Access road under the one network road classification (ONRC). Kauriki Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kauriki Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kauriki Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Stonefields Avenue: 50km/h (proposed 30km/h)</li> <li>Aruhe Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kauriki Terrace has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kauriki Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kauru Way (Karakaka)

The speed limit on Kauru Way, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kauru Way connects to Patakatuna Drive to the north and Te Ipukai Drive to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Kauru Way is classified as an Access road under the one network road classification (ONRC). Kauru Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kauru Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kauru Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Patakatuna Drive: 50km/h (proposed 30km/h)</li> <li>• Te Ipukai Drive: 50km/h (proposed 30km/h)</li> <li>• Umuti Lane: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kauru Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kauru Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kawaka Street (Mount Eden)

The speed limit on Kawaka Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kawaka Street connects to View Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Kawaka Street is classified as a Access road under the one network road classification (ONRC). Kawaka Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kawaka Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kawaka Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>View Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kawaka Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kawaka Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kealy Road (Mt Wellington)

The speed limit on Kealy Road, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kealy Road connects to Bernard Street to the east and Panama Road to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Kealy Road is classified as an Access road under the one network road classification (ONRC). Kealy Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kealy Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kealy Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bernard Street: 50km/h (proposed 30km/h)</li> <li>Panama Road: 50km/h (proposed 30km/h)</li> <li>Ataahua Lane: 50km/h (proposed 30km/h)</li> <li>Rerehua Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kealy Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kealy Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Keegan Drive (Massey)

The speed limit on Keegan Drive, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Keegan Drive connects to Triangle Road to the north and Waimumu Road to the south. This road provides access to residential properties and is approximately 0.71km in length.</p> <p>Keegan Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Keegan Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Keegan Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Keegan Drive has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Triangle Road: 50km/h (no proposed change)</li> <li>• Waimumu Road: 50km/h (no proposed change)</li> <li>• Lilburn Crescent: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Keegan Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Keegan Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelburn Lane (Mangere)

The speed limit on Kelburn Lane, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelburn Lane connects to Ilford Crescent to the south. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Kelburn Lane is classified as an Access road under the one network road classification (ONRC). Kelburn Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelburn Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kelburn Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ilford Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kelburn Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelburn Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelkirk Street (Kelston)

The speed limit on Kelkirk Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelkirk Street connects to Daphne Street to the east and Barbary Avenue to the south. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Kelkirk Street is classified as an Access road under the one network road classification (ONRC). Kelkirk St is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelkirk Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kelkirk Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Daphne Street: 50km/h (proposed 30km/h)</li> <li>Barbary Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kelkirk Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelkirk Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelly Street (Mount Eden)

The speed limit on Kelly Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelly Street connects to Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Kelly Street is classified as a Access road under the one network road classification (ONRC). Kelly Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelly Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 300 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kelly Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mount Eden Road: 50km/h (no proposed change)</li> <li>Edenvale Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kelly Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelly Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelman Road (Kelston)

The speed limit on Kelman Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelman Road connects to Archibald Road to the east and Standage Lane to the south. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Kelman Road is classified as an Access road under the one network road classification (ONRC). Kelman Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one serious crash, one minor crash, five non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelman Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kelman Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Laura Street: 50km/h (proposed 30km/h)</li> <li>Standage Lane: 50km/h (proposed 30km/h)</li> <li>Barbary Avenue: 50km/h (proposed 30km/h)</li> <li>Manatu Lane: 50km/h (proposed 30km/h)</li> <li>Laura Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kelman Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelman Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelsey Crescent (Hillsborough)

The speed limit on Kelsey Crescent, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelsey Crescent connects to Hillsborough Road to the west and Hendry Avenue to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Kelsey Crescent is classified as a Access road under the one network road classification (ONRC). Kelsey Crescent is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kelsey Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Hillsborough Road: 50km/h (no proposed change)</li> <li>Hendry Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kelsey Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelsey Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelston Street (Kelston)

The speed limit on Kelston Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelston Street connects to Nikau Street to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Kelston Street is classified as an Access road under the one network road classification (ONRC). Kelston Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelston Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kelston Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Nikau Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kelston Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kelston Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kelwyn Road (Kelston)

The speed limit on Kelwyn Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kelwyn Road connects to Beaubank Road to the north and Lynwood Road to the east. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Kelwyn Road is classified as a Primary Collector road under the one network road classification (ONRC). Kelwyn Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one serious crash, four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kelwyn Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8074 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kelwyn Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Beaubank Road: 50km/h (proposed 30km/h)</li> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> <li>Alston Avenue: 50km/h (proposed 30km/h)</li> <li>Archlynn Road: 50km/h (proposed 30km/h)</li> <li>Copley Street: 50km/h (proposed 30km/h)</li> <li>Rimu Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kelwyn Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.26. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Kelwyn Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Kelwyn Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kemble Close (Mangere)

The speed limit on Kemble Close, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kemble Close connects to Mascot Avenue to the east. This road provides access to residential properties and is approximately 0.49km in length.</p> <p>Kemble Close is classified as a Secondary Collector road under the one network road classification (ONRC). Kemble Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kemble Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kemble Close has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mascot Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kemble Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.00. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kemble Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kenneth Small Crescent (Point Chevalier)

The speed limit on Kenneth Small Crescent, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kenneth Small Crescent connects to Walker Road to the east. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Kenneth Small Crescent is classified as an Access road under the one network road classification (ONRC). Kenneth Small Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kenneth Small Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kenneth Small Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Walker Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kenneth Small Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kenneth Small Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kennington Drive (Clendon Park)

The speed limit on Kennington Drive, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kennington Drive connects to Maplesden Drive to the north and Palmers Road to the south. This road provides access to residential properties and is approximately 0.43km in length.</p> <p>Kennington Drive is classified as an Access road under the one network road classification (ONRC). Kennington Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kennington Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 499 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kennington Drive has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Maplesden Drive: 50km/h (proposed 30km/h)</li> <li>• Palmers Road: 50km/h (proposed 30km/h)</li> <li>• Hatherley Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kennington Drive has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kennington Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kensington Drive (Orewa)

The speed limit on Kensington Drive, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kensington Drive connects to Eaves Bush Parade to the west and Parkside Drive to the west. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Kensington Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Kensington Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kensington Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kensington Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Eaves Bush Parade: 50km/h (proposed 30km/h)</li> <li>Parkside Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kensington Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kensington Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kensway Drive (Flat Bush)

The speed limit on Kensway Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kensway Drive connects to Baverstock Road to the north and Stancombe Road to the south. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Kensway Drive is classified as an Access road under the one network road classification (ONRC). Kensway Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kensway Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kensway Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Baverstock Road: 50km/h (proposed 30km/h)</li> <li>• Stancombe Road: 60km/h (no proposed change)</li> <li>• Janway Avenue: 50km/h (proposed 30km/h)</li> <li>• Heidi Crescent: 50km/h (proposed 30km/h)</li> <li>• Kestev Drive: 50km/h (proposed 30km/h)</li> <li>• Plantation Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kensway Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kensway Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kenton Lane (Mangere)

The speed limit on Kenton Lane, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kenton Lane connects to Ilford Crescent to the south. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Kenton Lane is classified as an Access road under the one network road classification (ONRC). Kenton Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kenton Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kenton Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ilford Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kenton Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kenton Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kenyon Avenue (Mount Eden)

The speed limit on Kenyon Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kenyon Avenue connects to Valley Road to the north and Ewington Avenue to the west. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Kenyon Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Kenyon Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kenyon Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kenyon Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ewington Avenue: 50km/h (proposed 30km/h)</li> <li>• Valley Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kenyon Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kenyon Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kessel-Way Court (Ranui)

The speed limit on Kessel-Way Court, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kessel-Way Court connects to Crailburn Street to the north and Swanson Road to the south. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Kessel-Way Court is classified as an Access road under the one network road classification (ONRC). Kessel-Way Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kessel-Way Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kessel-Way Court has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Craiburn Street: 50km/h (proposed 30km/h)</li> <li>• Swanson Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kessel-Way Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kessel-Way Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kestev Drive (Flat Bush)

The speed limit on Kestev Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kestev Drive connects to Kensway Drive to the east and Stancombe Road to the south. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Kestev Drive is classified as an Access road under the one network road classification (ONRC). Kestev Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kestev Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kestev Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kensway Drive: 50km/h (proposed 30km/h)</li> <li>Stancombe Road: 60km/h (no proposed change)</li> <li>Bushpark Place: 50km/h (proposed 30km/h)</li> <li>Erica Road: 50km/h (proposed 30km/h)</li> <li>Agapanthus Place: 50km/h (proposed 30km/h)</li> <li>Janway Avenue: 50km/h (proposed 30km/h)</li> <li>Lorenzo Way: 50km/h (proposed 30km/h)</li> <li>Reno Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kestev Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kestev Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kiernan Place (Kelston)

The speed limit on Kiernan Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kiernan Place connects to Cobham Crescent to the east. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Kiernan Place is classified as an Access road under the one network road classification (ONRC). Kiernan Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kiernan Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 320 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kiernan Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kiernan Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kiernan Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Killington Crescent (Mangere)

The speed limit on Killington Crescent, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Killington Crescent connects to Orly Avenue to the south and Staverton Crescent to the south. This road provides access to residential properties and is approximately 0.64km in length.</p> <p>Killington Crescent is classified as an Access road under the one network road classification (ONRC). Killington Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Killington Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Killington Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Orly Avenue: 50km/h (proposed 30km/h)</li> <li>Staverton Crescent: 50km/h (proposed 30km/h)</li> <li>Upwood Place: 50km/h (proposed 30km/h)</li> <li>Harwell Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Killington Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Killington Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kilmarnock Avenue (Ranui)

The speed limit on Kilmarnock Avenue, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kilmarnock Avenue connects to Hibernian Drive to the east and Armada Drive to the west. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Kilmarnock Avenue is classified as an Access road under the one network road classification (ONRC). Kilmarnock Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kilmarnock Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kilmarnock Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hibernian Drive: 50km/h (proposed 30km/h)</li> <li>• Armada Drive: 50km/h (proposed 30km/h)</li> <li>• Corran Place: 50km/h (proposed 30km/h)</li> <li>• Westvale Avenue: 50km/h (proposed 30km/h)</li> <li>• Glenarden Way: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kilmarnock Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kilmarnock Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kingdale Road (Henderson)

The speed limit on Kingdale Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kingdale Road connects to Pomaria Road to the south. This road provides access to residential properties and is approximately 0.62km in length.</p> <p>Kingdale Road is classified as a Secondary Collector road under the one network road classification (ONRC). Kingdale Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kingdale Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 447 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kingdale Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Pomaria Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kingdale Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kingdale Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kinleith Way (Albany)

The speed limit on Kinleith Way, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kinleith Way connects to Bass Road to the east. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Kinleith Way is classified as an Access road under the one network road classification (ONRC). Kinleith Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kinleith Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow lane (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kinleith Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bass Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kinleith Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kinleith Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kiwi Esplanade (Mangere Bridge)

The speed limit on Kiwi Esplanade, Mangere Bridge, between Boyd Avenue and the western end of Kiwi Esplanade, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kiwi Esplanade connects to Waterfront Road to the east and Andes Avenue to the west. This road provides access to residential properties and is approximately 2.49km in length.</p> <p>Kiwi Esplanade is classified as a Secondary Collector road under the one network road classification (ONRC). Kiwi Esplanade is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: three minor crashes, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kiwi Esplanade were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 805 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kiwi Esplanade has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waterfront Road: 50km/h (no proposed change)</li> <li>Andes Avenue: 50km/h (no proposed change)</li> <li>Coronation Road: 50km/h (no proposed change)</li> <li>Woodward Avenue: 50km/h (no proposed change)</li> <li>Scott Avenue: 50km/h (no proposed change)</li> <li>Boyd Avenue: 50km/h (proposed 30km/h)</li> <li>House Avenue: 50km/h (proposed 30km/h)</li> <li>Seaforth Avenue: 50km/h (proposed 30km/h)</li> <li>Chipping Dale: 50km/h (proposed 30km/h)</li> <li>Yorkton Rise: 50km/h (proposed 30km/h)</li> <li>Banbury Place: 50km/h (proposed 30km/h)</li> <li>Charesholm Place: 50km/h (proposed 30km/h)</li> <li>Sealand Place: 50km/h (proposed 30km/h)</li> </ul>

**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kiwi Esplanade has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kiwi Esplanade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Kiwi Road (Stanley Point)**

The speed limit on Kiwi Road, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kiwi Road connects to Patuone Place to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Kiwi Road is classified as a Secondary Collector road under the one network road classification (ONRC). Kiwi Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kiwi Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 473 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kiwi Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Patuone Place: 50km/h (proposed 30km/h)</li> <li>• Calliope Road: 50km/h (no proposed change)</li> <li>• Rutland Road: 50km/h (proposed 30km/h)</li> <li>• Roslyn Terrace: 50km/h (proposed 30km/h)</li> <li>• Shoal Bay Road: 50km/h (proposed 30km/h)</li> <li>• Ewen Alison Avenue: 50km/h (proposed 30km/h)</li> <li>• Jim Titchener Parade: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kiwi Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kiwi Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kohekohe Street (Kelston)

The speed limit on Kohekohe Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kohekohe Street connects to Lynwood Road to the west and Maunder Place to the east. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Kohekohe Street is classified as an Access road under the one network road classification (ONRC). Kohekohe Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kohekohe Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 367 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kohekohe Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> <li>Maunder Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kohekohe Street has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kohekohe Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kohi Kai Place (Weymouth)

The speed limit on Kohi Kai Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kohi Kai Place connects to Becker Drive to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Kohi Kai Place is classified as an Access road under the one network road classification (ONRC). Kohi Kai Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kohi Kai Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kohi Kai Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kohi Kai Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kohi Kai Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kona Crescent (Henderson)

The speed limit on Kona Crescent, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kona Crescent connects to Stephen Avenue to the east. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Kona Crescent is classified as an Access road under the one network road classification (ONRC). Kona Crescent is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kona Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 222 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kona Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Stephen Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kona Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kona Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kopara Place (Clendon Park)

The speed limit on Kopara Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kopara Place connects to Finlayson Avenue to the east. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Kopara Place is classified as an Access road under the one network road classification (ONRC). Kopara Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kopara Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 380 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kopara Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kopara Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kopara Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kopu Place (Clendon Park)

The speed limit on Kopu Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kopu Place connects to Finlayson Avenue to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Kopu Place is classified as an Access road under the one network road classification (ONRC). Kopu Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kopu Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kopu Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kopu Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kopu Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Korere Terrace (Stonefields)

The speed limit on Korere Terrace, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Korere Terrace connects to Papango to the east and Kauriki Terrace to the north. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Korere Terrace is classified as an Access road under the one network road classification (ONRC). Korere Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Korere Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Korere Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kauriki Terrace: 50km/h (proposed 30km/h)</li> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Papango Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Korere Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Korere Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Koromiko Street (Kelston)

The speed limit on Koromiko Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Koromiko Street connects to Nikau Street to the north and Miro Street to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Koromiko Street is classified as a Secondary Collector road under the one network road classification (ONRC). Koromiko Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Koromiko Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 615 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Koromiko Street has a mean operating speed in the range of 31km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nikau Street: 50km/h (proposed 30km/h)</li> <li>Miro Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Koromiko Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Koromiko Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Koropupu Street (Pukekohe)

The speed limit on Koropupu Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Koropupu Street connects to Tawhiti Road to the north and Te Manaki Street to the east. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Koropupu Street is classified as an Access road under the one network road classification (ONRC). Koropupu Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Koropupu Street were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Koropupu Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tawhiti Road: 50 km/h (proposed 30 km/h)</li> <li>• Te Manaki Street: 50 km/h (proposed 30 km/h)</li> <li>• Hemptopo Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Koropupu Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Koropupu Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kowhai Avenue (Mangere Bridge)

The speed limit on Kowhai Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kowhai Avenue connects to Wallace Road to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Kowhai Avenue is classified as an Access road under the one network road classification (ONRC). Kowhai Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kowhai Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kowhai Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wallace Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kowhai Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kowhai Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kowhai Terrace (Leigh)

The speed limit on Kowhai Terrace, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kowhai Terrace connects to Cumberland Street to the north. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Kowhai Terrace is classified as an Access road under the one network road classification (ONRC). Kowhai Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kowhai Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kowhai Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Cumberland Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kowhai Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kowhai Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kowhai Terrace (Leigh)

The speed limit on Kowhai Terrace, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kowhai Terrace connects to Harbour View Road to the south. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Kowhai Terrace is classified as an Access road under the one network road classification (ONRC). Kowhai Terrace is a two-way, Unsealed road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kowhai Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 24 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kowhai Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Harbour View Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kowhai Terrace has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.77. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kowhai Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kuaka Place (Kelston)

The speed limit on Kuaka Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kuaka Place connects to Nikau Street to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Kuaka Place is classified as an Access road under the one network road classification (ONRC). Kuaka Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kuaka Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 258 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kuaka Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Nikau Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kuaka Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kuaka Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kudu Road (Otarā)

The speed limit on Kudu Road, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kudu Road connects to Preston Road to the east and Hannah Road to the west. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Kudu Road is classified as an Access road under the one network road classification (ONRC). Kudu Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kudu Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 925 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kudu Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Preston Road: 50km/h (no proposed change)</li> <li>Hannah Road: 50km/h (proposed 30km/h)</li> <li>Birch Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kudu Road has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kudu Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kunzea Place (Greenhithe)

The speed limit on Kunzea Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kunzea Place connects to Miromiro Street to the west. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Kunzea Place is classified as a Secondary Collector road under the one network road classification (ONRC). Kunzea Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kunzea Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kunzea Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Miromiro Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kunzea Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kunzea Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kuparu Street (Weymouth)

The speed limit on Kuparu Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kuparu Street connects to Kaimoana Street to the east and Tonuitanga Street to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Kuparu Street is classified as an Access road under the one network road classification (ONRC). Kuparu Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kuparu Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kuparu Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>Tonuitanga Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kuparu Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kuparu Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kurt Lane (Otarā)

The speed limit on Kurt Lane, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kurt Lane connects to Oconnor Street to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Kurt Lane is classified as an Access road under the one network road classification (ONRC). Kurt Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kurt Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kurt Lane has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Oconnor Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Kurt Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kurt Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kuurae Crescent (Weymouth)

The speed limit on Kuurae Crescent, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kuurae Crescent connects to Ipukarea Street to the east and Apa Street to the east. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Kuurae Crescent is classified as an Access road under the one network road classification (ONRC). Kuurae Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kuurae Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kuurae Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ipukarea Street: 50km/h (proposed 30km/h)</li> <li>Apa Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kuurae Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kuurae Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kyle Road (Greenhithe)

The speed limit on Kyle Road, Greenhithe, between Wicklam Lane and the southern end of Kyle Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kyle Road connects to Orwell Road to the south and Schnapper Rock Road to the north. This road provides access to residential properties and is approximately 2.46km in length.</p> <p>Kyle Road is classified as an Access road under the one network road classification (ONRC). Kyle Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: two minor crashes, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kyle Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban Residential using MegaMaps tool. The IRR defines urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2090 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kyle Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Schnapper Rock Road: 50km/h (no proposed change)</li> <li>• Albertine Place: 50km/h (no proposed change)</li> <li>• Wicklam Lane: 50km/h (no proposed change)</li> <li>• William Gamble Drive: 50km/h (proposed 30km/h)</li> <li>• Miromiro Street: 50km/h (proposed 30km/h)</li> <li>• Pitoitoi Avenue: 50km/h (proposed 30km/h)</li> <li>• Huntington Park Drive: 50km/h (proposed 30km/h)</li> <li>• Lemon Grove Lane: 50km/h (proposed 30km/h)</li> <li>• Northbrook Close: 50km/h (proposed 30km/h)</li> <li>• Admirals Court Drive: 50km/h (proposed 30km/h)</li> <li>• Greenbough Lane: 50km/h (proposed 30km/h)</li> <li>• Maryann Place: 50km/h (proposed 30km/h)</li> <li>• Orwell Place: 50km/h (proposed 30km/h)</li> <li>• Mural Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kyle Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kyle Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kyle Street (Leigh)

The speed limit on Kyle Street, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kyle Street connects to Barrier View Road to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Kyle Street is classified as an Access road under the one network road classification (ONRC). Kyle Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kyle Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Kyle Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Barrier View Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Kyle Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kyle Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lagonda Rise (Oteha)

The speed limit on Lagonda Rise, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lagonda Rise connects to Medallion Drive to the east and Masons Road to the west. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Lagonda Rise is classified as an Access road under the one network road classification (ONRC). Lagonda Rise is a two-way, Two lane undivided road. There are pedestrian amenities and partial on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lagonda Rise were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lagonda Rise has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Medallion Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lagonda Rise has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.09. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lagonda Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lancia Way (Oteha)

The speed limit on Lancia Way, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lancia Way connects to Lagonda Rise to the south. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Lancia Way is classified as an Access road under the one network road classification (ONRC). Lancia Way is a two-way, Two lane undivided road. There are no pedestrian amenities, on-street parking and cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lancia Way were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lancia Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lagonda Rise: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lancia Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lancia Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Landmark Terrace (Orewa)

The speed limit on Landmark Terrace, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Landmark Terrace connects to Panorama Heights to the north and Puriri Boulevard to the east. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Landmark Terrace is classified as an Access road under the one network road classification (ONRC). Landmark Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Landmark Terrace were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Landmark Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Panorama Heights: 50km/h (proposed 30km/h)</li> <li>• Puriri Boulevard: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Landmark Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Landmark Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Landon Place (Pukekohe)

The speed limit on Landon Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Landon Place connects to Puriri Road to the west. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Landon Place is classified as an Access road under the one network road classification (ONRC). Landon Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Landon Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Landon Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Puriri Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Landon Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Landon Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lane Road (Weymouth)

The speed limit on Lane Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lane Road connects to Waimai Avenue to the north and McInnes Road to the south. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Lane Road is classified as an Access road under the one network road classification (ONRC). Lane Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lane Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lane Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waimai Avenue: 50km/h (proposed 30km/h)</li> <li>• McInnes Road: 50km/h (proposed 30km/h)</li> <li>• McLeod Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lane Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lane Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lapilli Lane (Stonefields)

The speed limit on Lapilli Lane, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lapilli Lane connects to Charles Heaphy Lane to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Lapilli Lane is classified as an Access road under the one network road classification (ONRC). Lapilli Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lapilli Lane were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>Estimated from MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lapilli Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Charles Heaphy Lane: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lapilli Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lapilli Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Largo Lane (Otara)

The speed limit on Largo Lane, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Largo Lane connects to Johnstones Road to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Largo Lane is classified as an Access road under the one network road classification (ONRC). Largo Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Largo Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Largo Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Johnstones Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Largo Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Largo Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Larissa Avenue (Henderson)

The speed limit on Larissa Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Larissa Avenue connects to Rathgar Road to the east and Larnoch Road to the south. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Larissa Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Larissa Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Larissa Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 438 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Larissa Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> <li>Larnoch Road: 50km/h (proposed 30km/h)</li> <li>Mildmay Road: 50km/h (proposed 30km/h)</li> <li>Vanden Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Larissa Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Larissa Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Larnoch Road (Henderson)

The speed limit on Larnoch Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Larnoch Road connects to Rathgar Road to the east and Swanson Road to the west. This road provides access to residential properties and is approximately 0.65km in length.</p> <p>Larnoch Road is classified as an Arterial road under the one network road classification (ONRC). Larnoch Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: three minor crashes, six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Larnoch Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6411 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Larnoch Road has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Rathgar Road: 50km/h (proposed 30km/h)</li> <li>• Swanson Road: 50km/h (no proposed change)</li> <li>• Powell Place: 50km/h (proposed 30km/h)</li> <li>• Alan Ave: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Larnoch Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.40. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Larnoch Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Larnoch Road is an Arterial Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lastel Place (Shelly Park)

The speed limit on Lastel Place, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lastel Place connects to Sandspit Road to the west. This road provides access to residential properties and is approximately 0.34 km in length.</p> <p>Lastel Place is classified as an access road under the one network road classification (ONRC). Lastel Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 390 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lastel Place has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sandspit Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lastel Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.09 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Lastel Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Laura Street (Kelston)

The speed limit on Laura Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Laura Street connects to Hurley Place to the north and Kelman Road to the south. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Laura Street is classified as an Access road under the one network road classification (ONRC). Laura Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Laura Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Laura Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hurley Place: 50km/h (proposed 30km/h)</li> <li>• Kelman Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Laura Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Laura Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lavender Garden Lane (Oteha)

The speed limit on Lavender Garden Lane, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lavender Garden Lane connects to Masons Road to the east. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Lavender Garden Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Lavender Garden Lane is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lavender Garden Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lavender Garden Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Masons Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lavender Garden Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lavender Garden Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lawford Place (Mangere)

The speed limit on Lawford Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lawford Place connects to Staverton Crescent to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Lawford Place is classified as an Access road under the one network road classification (ONRC). Lawford Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lawford Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lawford Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Staverton Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lawford Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lawford Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lawrence Place (Otara)

The speed limit on Lawrence Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lawrence Place connects to Velvet Crescent to the north. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Lawrence Place is classified as an Access road under the one network road classification (ONRC). Lawrence Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lawrence Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lawrence Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Velvet Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lawrence Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lawrence Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lawson Way (Weymouth)

The speed limit on Lawson Way, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lawson Way connects to Weymouth Road to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Lawson Way is classified as an Access road under the one network road classification (ONRC). Lawson Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lawson Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lawson Way has a mean operating speed in the range of <31km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lawson Way has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 41km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 41km/h as the safe and appropriate speed for Lawson Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lax Crescent (Leigh)

The speed limit on Lax Crescent, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lax Crescent connects to Wonderview Road to the east. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Lax Crescent is classified as an Access road under the one network road classification (ONRC). Lax Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lax Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lax Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wonderview Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lax Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.26. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lax Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Layard Street (Avondale)

The speed limit on Layard Street, Avondale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Layard Street connects to Rosebank Road to the north and St Jude Street to the south. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Layard Street is classified as an Access road under the one network road classification (ONRC). Layard Street is a two-way, Divided - non-traversable OR One way road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Layard Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided - non-traversable OR One way</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 745 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Layard Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Rosebank Road: 50km/h (no proposed change)</li> <li>• St Jude Street: 50km/h (no proposed change)</li> <li>• Crayford Street West: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Layard Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.22. For urban areas this corresponds to an IRR band of **Low**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Layard Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Leamington Road (Mount Eden)

The speed limit on Leamington Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Leamington Road connects to Bellevue Road to the north and Valley Road to the south. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Leamington Road is classified as a Access road under the one network road classification (ONRC). Leamington Road is a two-way, Divided-non traversable OR one way road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Leamington Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided-non traversable OR one way</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 364 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Leamington Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bellevue Road: 50km/h (proposed 30km/h)</li> <li>Valley Road: 50km/h (proposed 30km/h)</li> <li>Kamahi Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Leamington Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is **1.51**. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Leamington Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Leaver Place (Weymouth)

The speed limit on Leaver Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Leaver Place connects to Damian Way to the north and Ipukarea Street to the south. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Leaver Place is classified as an Access road under the one network road classification (ONRC). Leaver Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Leaver Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Leaver Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Damian Way: 50km/h (proposed 30km/h)</li> <li>Ipukarea Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Leaver Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Leaver Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Leeson Place (Mangere)

The speed limit on Leeson Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Leeson Place connects to Duggan Avenue to the west. This road provides access to residential properties and is approximately 0.85km in length.</p> <p>Leeson Place is classified as an Access road under the one network road classification (ONRC). Leeson Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Leeson Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 301 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Leeson Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Duggan Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Leeson Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Leeson Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lemon Grove Lane (Greenhithe)

The speed limit on Lemon Grove Lane, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lemon Grove Lane connects to Kyle Road to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Lemon Grove Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Lemon Grove Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lemon Grove Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lemon Grove Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lemon Grove Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lemon Grove Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Leonards Place (Otarā)

The speed limit on Leonards Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Leonards Place connects to Blampied Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Leonards Place is classified as an Access road under the one network road classification (ONRC). Leonards Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Leonards Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 655 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Leonards Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Blampied Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Leonards Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Leonards Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Les Marston Place (Pukekohe)

The speed limit on Les Marston Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Les Marston Place connects to Princes Street West to the north. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Les Marston Place is classified as an Access road under the one network road classification (ONRC). Les Marston Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Les Marston Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Les Marston Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Princes Street West: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Les Marston Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Les Marston Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lester Lane (Otara)

The speed limit on Lester Lane, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lester Lane connects to Johnstones Road to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Lester Lane is classified as an Access road under the one network road classification (ONRC). Lester Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lester Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lester Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Johnstones Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lester Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lester Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lichfield Road (Parnell)

The speed limit on Lichfield Road, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lichfield Road connects to Saint Stephens Avenue to the west and Takutai Street to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Lichfield Road is classified as a Secondary Collector road under the one network road classification (ONRC). Lichfield Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lichfield Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lichfield Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Saint Stephens Avenue between Gladstone Road and the northern end of Saint Stephens Avenue: 50km/h (proposed 30km/h)</li> <li>Takutai Street: 50km/h (proposed 30km/h)</li> <li>Glanville Terrace: 50km/h (proposed 30km/h)</li> <li>Logan Terrace: 50km/h (proposed 30km/h)</li> <li>Waitoa Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lichfield Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lichfield Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lilac Grove (Hillsborough)

The speed limit on Lilac Grove, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lilac Grove connects to Frederick Street to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Lilac Grove is classified as an Access road under the one network road classification (ONRC). Lilac Grove is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lilac Grove has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Frederick Street: 50km/h (proposed 3 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lilac Grove has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lilac Grove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lilburn Crescent (Massey)

The speed limit on Lilburn Crescent, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lilburn Crescent connects to Timandra Place to the north and Keegan Drive to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Lilburn Crescent is classified as an Access road under the one network road classification (ONRC). Lilburn Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lilburn Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 320 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lilburn Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Timandra Place: 50km/h (proposed 30km/h)</li> <li>Keegan Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lilburn Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lilburn Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lincoln Road (Manurewa East)

The speed limit on Lincoln Road, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lincoln Road connects to Mcannalley Street to the north and Myers Road to the south. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Lincoln Road is classified as an Access road under the one network road classification (ONRC). Lincoln Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lincoln Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 343 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lincoln Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mcannalley Street: 50km/h (proposed 30km/h)</li> <li>• Myers Road: 50km/h (proposed 30km/h)</li> <li>• Camberley Court: 50km/h (proposed 30km/h)</li> <li>• McDougall Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lincoln Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lincoln Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lindis Place (Mangere Bridge)

The speed limit on Lindis Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lindis Place connects to Muir Avenue to the north. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Lindis Place is classified as a Access road under the one network road classification (ONRC). Lindis Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lindis Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lindis Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lindis Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lindis Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lismore Way (Oteha)

The speed limit on Lismore Way, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lismore Way connects to Medallion Drive to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Lismore Way is classified as a Secondary Collector road under the one network road classification (ONRC). Lismore Way is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lismore Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lismore Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Medallion Drive: 50km/h (proposed 30km/h)</li> <li>Masons Road: 50km/h (proposed 30km/h)</li> <li>Allegro Way: 50km/h (proposed 30km/h)</li> <li>Lancia Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lismore Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lismore Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lisnoe Avenue (Mount Eden)

The speed limit on Lisnoe Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lisnoe Avenue connects to Dominion Road to the west and Alderley Road to the east. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Lisnoe Avenue is classified as a Access road under the one network road classification (ONRC). Lisnoe Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lisnoe Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 416 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lisnoe Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dominion Road: 50km/h (no proposed change)</li> <li>• Alderley Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lisnoe Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lisnoe Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lister Street (Point Chevalier)

The speed limit on Lister Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lister Street connects to Dignan Street to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Lister Street is classified as an Access road under the one network road classification (ONRC). Lister Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lister Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lister Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Dignan Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lister Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lister Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Logan Terrace (Parnell)

The speed limit on Logan Terrace, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Logan Terrace connects to Lichfield Road to the west. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Logan Terrace is classified as an Access road under the one network road classification (ONRC). Logan Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Logan Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 300 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Logan Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lichfield Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Logan Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Logan Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Longburn Road (Henderson)

The speed limit on Longburn Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Longburn Road connects to Rathgar Road to the west and Pomaria Road to the south. This road provides access to residential properties and is approximately 0.56km in length.</p> <p>Longburn Road is classified as a Secondary Collector road under the one network road classification (ONRC). Longburn Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Longburn Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1196 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Longburn Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Rathgar Road: 50km/h (proposed 30km/h)</li> <li>• Pomaria Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Longburn Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Longburn Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lorenzo Way (Flat Bush)

The speed limit on Lorenzo Way, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lorenzo Way connects to Janway Avenue to the north and Stancombe Road to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Lorenzo Way is classified as an Access road under the one network road classification (ONRC). Lorenzo Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lorenzo Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lorenzo Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Janway Avenue: 50km/h (proposed 30km/h)</li> <li>Stancombe Road: 60km/h (no proposed change)</li> <li>Kestev Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lorenzo Way has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lorenzo Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Louvain Place (Greenhithe)

The speed limit on Louvain Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Louvain Place connects to Orwell Road to the west. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Louvain Place is classified as an Access road under the one network road classification (ONRC). Louvain Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Louvain Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Louvain Place has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Orwell Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Louvain Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Louvain Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lovelock Avenue (Mount Eden)

The speed limit on Lovelock Avenue, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lovelock Avenue connects to Esplanade Road to the west and Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Lovelock Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Lovelock Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lovelock Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lovelock Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Esplanade Road: 50km/h (proposed 30km/h)</li> <li>Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lovelock Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lovelock Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Luanda Drive (Ranui)

The speed limit on Luanda Drive, Ranui, between Waitemata Drive roundabout and Swanson Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Luanda Drive connects to Glen Road to the east and Swanson Road to the south. This road provides access to residential properties and is approximately 0.77km in length.</p> <p>Luanda Drive is classified as a Primary Collector road under the one network road classification (ONRC). Luanda Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one serious crash, one minor crash, five non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Luanda Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1051 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Luanda Drive has a mean operating speed in the range of 35-39km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Glen Road: 50km/h (proposed 30km/h)</li> <li>Swanson Road: 50km/h (no proposed change)</li> <li>Waitemata Drive between Luanda Drive and the northern end of Waitemata Drive: 50km/h (proposed 30km/h)</li> <li>Arodella Crescent: 50km/h (proposed 30km/h)</li> <li>Hamblyn Place: 50km/h (proposed 30km/h)</li> <li>Armada Drive: 50km/h (proposed 30km/h)</li> <li>Ulrich Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Luanda Drive has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Luanda Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while Luanda Drive is classified as a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lucas Place (Weymouth)

The speed limit on Lucas Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lucas Place connects to Blanes Road to the north. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Lucas Place is classified as an Access road under the one network road classification (ONRC). Lucas Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lucas Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lucas Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blanes Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lucas Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lucas Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ludlow Place (Pukekohe)

The speed limit on Ludlow Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ludlow Place connects to Premila Drive to the north. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Ludlow Place is classified as an Access road under the one network road classification (ONRC). Ludlow Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ludlow Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ludlow Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Premila Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ludlow Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ludlow Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lynch Street (Point Chevalier)

The speed limit on Lynch Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lynch Street connects to Oliver Street to the north and Dignan Street to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Lynch Street is classified as an Access road under the one network road classification (ONRC). Lynch Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lynch Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lynch Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Oliver Street: 50 km/h (proposed 30 km/h)</li> <li>Dignan Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lynch Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lynch Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lyndhurst Road (Te Atatu South)

The speed limit on Lyndhurst Road, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lyndhurst Road connects to Te Atatu Road to the west and Tirooa Avenue to the east. This road provides access to residential properties and is approximately 0.41 km in length.</p> <p>Lyndhurst Road is classified as a secondary collector road under the one network road classification (ONRC). Lyndhurst Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injuries. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1686 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lyndhurst Road has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Te Atatu Road: 50 km/h</li> <li>• Merville Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Merchant Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Tiroroa Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lyndhurst Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.30 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Lyndhurst Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lynwood Road (Kelston)

The speed limit on Lynwood Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lynwood Road connects to Nikau Street to the north and Great North Road to the east. This road provides access to residential properties and is approximately 1.10km in length.</p> <p>Lynwood Road is classified as a Secondary Collector road under the one network road classification (ONRC). Lynwood Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: one minor crash, seven non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lynwood Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1920 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Lynwood Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nikau Street: 50km/h (proposed 30km/h)</li> <li>Great North Road : 50km/h (no proposed change)</li> <li>Kelwyn Road: 50km/h (proposed 30km/h)</li> <li>Rimu Street: 50km/h (proposed 30km/h)</li> <li>Miro Street: 50km/h (proposed 30km/h)</li> <li>Evergreen Rise: 50km/h (proposed 30km/h)</li> <li>Kohekohe Street: 50km/h (proposed 30km/h)</li> <li>Rickards Place: 50km/h (proposed 30km/h)</li> <li>Riverview Road: 50km/h (proposed 30km/h)</li> <li>Rewa Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Lynwood Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lynwood Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lytton Street (Devonport)

The speed limit on Lytton Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lytton Street connects to Abbotsford Terrace to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Lytton Street is classified as an Access road under the one network road classification (ONRC). Lytton Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lytton Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Lytton Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Abbotsford Terrace: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Lytton Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lytton Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Macky Avenue (Mangere East)

The speed limit on Macky Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Macky Avenue connects to Blake Road to the east. This road provides access to residential properties and is approximately 0.88km in length.</p> <p>Macky Avenue is classified as an Access road under the one network road classification (ONRC). Macky Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Macky Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1075 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Macky Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blake Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Macky Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Macky Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Magma Crescent (Stonefields)

The speed limit on Magma Crescent, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Magma Crescent connects to Ngahue Drive to the west. This road provides access to residential properties and is approximately 0.73km in length.</p> <p>Magma Crescent is classified as an Access road under the one network road classification (ONRC). Magma Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Magma Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Magma Crescent has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ngahue Drive: 50km/h (no proposed change)</li> <li>• Flint Way: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Magma Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Magma Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Magnolia Place (Flat Bush)

The speed limit on Magnolia Place, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Magnolia Place connects to Erica Road to the west. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Magnolia Place is classified as an Access road under the one network road classification (ONRC). Magnolia Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Magnolia Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Magnolia Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Erica Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Magnolia Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Magnolia Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mahoney Drive (Albany)

The speed limit on Mahoney Drive, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mahoney Drive connects to Vinewood Drive to the east. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Mahoney Drive is classified as a Access road under the one network road classification (ONRC). Mahoney Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mahoney Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mahoney Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Vinewood Drive: 50km/h (proposed 30km/h)</li> <li>Cuthill Close: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mahoney Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mahoney Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maidstone Place (Oteha)

The speed limit on Maidstone Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maidstone Place connects to Spencer Road to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Maidstone Place is classified as a Access road under the one network road classification (ONRC). Maidstone Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maidstone Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maidstone Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Spencer Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maidstone Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maidstone Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mail Avenue (Weymouth)

The speed limit on Mail Avenue, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mail Avenue connects to Estuary Road to the north and Greers Road to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Mail Avenue is classified as an Access road under the one network road classification (ONRC). Mail Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mail Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 353 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mail Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Estuary Road: 50km/h (proposed 30km/h)</li> <li>• Greers Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mail Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mail Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maioha Road (Pukekohe)

The speed limit on Maioha Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maioha Road connects to Ryder Place to the west and Jutland Road to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Maioha Road is classified as an Access road under the one network road classification (ONRC). Maioha Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maioha Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maioha Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ryder Place: 50km/h (proposed 30km/h)</li> <li>Jutland Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maioha Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maioha Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maleme Avenue (Belmont)

The speed limit on Maleme Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maleme Avenue connects to Westwell Road to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Maleme Avenue is classified as an Access road under the one network road classification (ONRC). Maleme Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maleme Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Maleme Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Westwell Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Maleme Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maleme Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mangere Town Square (Mangere)

The speed limit on Mangere Town Square, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mangere Town Square connects to Orly Avenue to the west. This road provides access to residential properties and is approximately 0.80km in length.</p> <p>Mangere Town Square is classified as an Access road under the one network road classification (ONRC). Mangere Town Square is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: three minor and five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mangere Town Square were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as commercial big box using MegaMaps tool. The IRR defines commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 582 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mangere Town Square has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Orly Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mangere Town Square has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.78. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mangere Town Square, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mangos Place (Pakuranga)

The speed limit on Mangos Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mangos Place connects to Edgewater Drive to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Mangos Place is classified as a Access road under the one network road classification (ONRC). Mangos Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mangos Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mangos Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Edgewater Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mangos Place has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Mangos Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Manuka Street (Orewa)

The speed limit on Manuka Street, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Manuka Street connects to Elizabeth Street to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Manuka Street is classified as an Access road under the one network road classification (ONRC). Manuka Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Manuka Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 97 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Manuka Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Elizabeth Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Manuka Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Manuka Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maplesden Drive (Clendon Park)

The speed limit on Maplesden Drive, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maplesden Drive connects to Burundi Avenue to the north and Finlayson Avenue to the west. This road provides access to residential properties and is approximately 0.77km in length.</p> <p>Maplesden Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Maplesden Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eleven crashes between 2016 and 2020: one serious crash, three minor crashes, seven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maplesden Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2028 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maplesden Drive has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Burundi Avenue: 50km/h (proposed 30km/h)</li> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> <li>Dungarvon Place: 50km/h (proposed 30km/h)</li> <li>Barneys Farm Road: 50km/h (proposed 30km/h)</li> <li>De Bloge Place: 50km/h (proposed 30km/h)</li> <li>Kennington Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maplesden Drive has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.19. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maplesden Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maranui Avenue (Point Chevalier)

The speed limit on Maranui Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maranui Avenue connects to Walker Road to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Maranui Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Maranui Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maranui Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Maranui Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Walker Road: 50 km/h (proposed 30 km/h)</li> <li>• Wainoni Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Maranui Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maranui Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Marbella Crescent (Oteha)

The speed limit on Marbella Crescent, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marbella Crescent connects to Nimstedt Avenue to the south. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Marbella Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Marbella Crescent is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marbella Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Marbella Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nimstedt Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Marbella Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Marbella Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Margaret Henry Crescent (Oteha)

The speed limit on Margaret Henry Crescent, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Margaret Henry Crescent connects to Ponderosa Drive to the north. This road provides access to residential properties and is approximately 1.93km in length.</p> <p>Margaret Henry Crescent is classified as an Access road under the one network road classification (ONRC). Margaret Henry Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Margaret Henry Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Margaret Henry Crescent has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ponderosa Drive: 50km/h (proposed 30km/h)</li> <li>• Northcross Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Margaret Henry Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Margaret Henry Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Marire Place (Pukekohe)

The speed limit on Marire Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marire Place connects to Huamanu Street to the south. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Marire Place is classified as an Access road under the one network road classification (ONRC). Marire Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records to zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marire Place were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Marire Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Huamanu Street: 50 km/h (proposed 30 km/h)</li> <li>Te Manaki Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Marire Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Marire Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mark Edgar Place (Weymouth)

The speed limit on Mark Edgar Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mark Edgar Place connects to Nicholas Gibbons Drive to the west. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Mark Edgar Place is classified as an Access road under the one network road classification (ONRC). Mark Edgar Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mark Edgar Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mark Edgar Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Nicholas Gibbons Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mark Edgar Place has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mark Edgar Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Martha Lane (Weymouth)

The speed limit on Martha Lane, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Martha Lane connects to Taitimu Drive to the west. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Martha Lane is classified as an Access road under the one network road classification (ONRC). Martha Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Martha Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 958 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Martha Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Martha Lane has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Martha Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Martin Place (Kelston)

The speed limit on Martin Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Martin Place connects to Brains Road to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Martin Place is classified as an Access road under the one network road classification (ONRC). Martin Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Martin Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 225 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Martin Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Brains Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Martin Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Martin Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mary Forgham Drive (Greenhithe)

The speed limit on Mary Forgham Drive, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mary Forgham Drive connects to William Gamble Drive to the north. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Mary Forgham Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Mary Forgham Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mary Forgham Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mary Forgham Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>William Gamble Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mary Forgham Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mary Forgham Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maryann Place (Greenhithe)

The speed limit on Maryann Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maryann Place connects to Orwell Road to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Maryann Place is classified as an Access road under the one network road classification (ONRC). Maryann Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maryann Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Maryann Place has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Orwell Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Maryann Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maryann Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maryland Street (Point Chevalier)

The speed limit on Maryland Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maryland Street connects to Walker Road to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Maryland Street is classified as a Secondary Collector road under the one network road classification (ONRC). Maryland Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maryland Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1768 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maryland Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Walker Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maryland Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.97. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maryland Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mascot Avenue (Mangere)

The speed limit on Mascot Avenue, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mascot Avenue connects to Court Town Close to the north and Massey Road to the south. This road provides access to residential properties and is approximately 1.07km in length.</p> <p>Mascot Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Mascot Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seventeen crashes between 2016 and 2020: one serious crash, two minor crashes, fourteen non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mascot Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4052 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mascot Avenue has a mean operating speed in the range of 34-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bader Road: 50km/h (no proposed change)</li> <li>• Massey Road: 50km/h (no proposed change)</li> <li>• Court Town Close: 50km/h (no proposed change)</li> <li>• Canning Crescent: 50km/h (proposed 30km/h)</li> <li>• Friesian Drive: 50km/h (proposed 30km/h)</li> <li>• Heyford Close: 50km/h (proposed 30km/h)</li> <li>• Kemble Close: 50km/h (proposed 30km/h)</li> <li>• Forbury Place: 50km/h (proposed 30km/h)</li> <li>• Waddon Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mascot Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Mascot Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Mascot Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Masons Road (Oteha)

The speed limit on Masons Road, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Masons Road connects to Lagonda Rise to the north and Lavender Garden Lane to the east. This road provides access to residential properties and is approximately 0.63km in length.</p> <p>Masons Road is classified as a Secondary Collector road under the one network road classification (ONRC). Masons Road is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Masons Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Masons Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lagonda Rise: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Masons Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Masons Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mataitai Way (Karakā)

The speed limit on Mataitai Way, Karakā has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mataitai Way connects to Patakātuna Drive to the north and Te Ipukai Drive to the south. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Mataitai Way is classified as an Access road under the one network road classification (ONRC). Mataitai Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mataitai Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mataitai Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Patakatuna Drive: 50km/h (proposed 30km/h)</li> <li>• Te Ipukai Drive: 50km/h (proposed 30km/h)</li> <li>• Umuti Lane: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mataitai Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mataitai Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Matamata Place (Otara)

The speed limit on Matamata Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matamata Place connects to Valder Avenue to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Matamata Place is classified as an Access road under the one network road classification (ONRC). Matamata Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matamata Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 686 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Matamata Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Valder Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Matamata Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Matamata Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mataroa Road (Mt Wellington)

The speed limit on Mataroa Road, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mataroa Road connects to Panama Road to the north. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Mataroa Road is classified as a Access road under the one network road classification (ONRC). Mataroa Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mataroa Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mataroa Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Panama Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mataroa Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mataroa Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Matikao Place (Pukekohe)

The speed limit on Matikao Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matikao Place connects to Taikaranga Street to the north and Belmont Road to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Matikao Place is classified as an Access road under the one network road classification (ONRC). Matikao Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matikao Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Matikao Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Taikaranga Street: 50km/h (proposed 30km/h)</li> <li>Belmont Road: 50km/h (proposed 30km/h)</li> <li>Kare Ariki Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Matikao Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Matikao Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Matilda Place (Weymouth)

The speed limit on Matilda Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matilda Place connects to Settlers Cove to the north. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Matilda Place is classified as an Access road under the one network road classification (ONRC). Matilda Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matilda Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Matilda Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Matilda Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Matilda Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mattson Road (Pakuranga)

The speed limit on Mattson Road, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mattson Road connects to Ti Rakau Drive to the north. This road provides access to residential properties and is approximately 0.28 km in length.</p> <p>Mattson Road is classified as a secondary collector road under the one network road classification (ONRC). Mattson Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2184 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mattson Road has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ti Rakau Drive: 60 km/h (no proposed changes)</li> <li>Aurea Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mattson Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**
- The Infrastructure Risk Rating Score is 2.30 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Mattson Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Matua Place (Clendon Park)

The speed limit on Matua Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matua Place connects to Finlayson Avenue to the east. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Matua Place is classified as an Access road under the one network road classification (ONRC). Matua Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matua Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Matua Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Matua Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Matua Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maunder Place (Kelston)

The speed limit on Maunder Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maunder Place connects to Kohekohe Street to the south. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Maunder Place is classified as an Access road under the one network road classification (ONRC). Maunder Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maunder Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 367 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maunder Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kohekohe Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maunder Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maunder Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maurice Borich Place (Henderson)

The speed limit on Maurice Borich Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maurice Borich Place connects to Rathgar Road to the east and Splendour Close to the north. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Maurice Borich Place is classified as an Access road under the one network road classification (ONRC). Maurice Borich Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maurice Borich Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 349 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Maurice Borich Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Rathgar Road: 50km/h (proposed 30km/h)</li> <li>• Splendour Close: 50km/h (proposed 30km/h)</li> <li>• Welcome Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Maurice Borich Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maurice Borich Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mawney Road (Henderson)

The speed limit on Mawney Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mawney Road connects to Larnoch Road to the south and Mildmay Road to the east. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Mawney Road is classified as an Access road under the one network road classification (ONRC). Mawney Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mawney Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 221 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mawney Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Larnoch Road: 50km/h (proposed 30km/h)</li> <li>Mildmay Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mawney Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mawney Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – May Potter Close (Oteha)

The speed limit on May Potter Close, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	May Potter Close connects to Fernhill Way to the south. This road provides access to residential properties and is approximately 0.08km in length.  May Potter Close is classified as an Access road under the one network road classification (ONRC). May Potter Close is a two-way, Two lane undivided road. There are no pedestrian amenities, on-street parking and cyclist amenities along this road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for May Potter Close were estimated using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of May Potter Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps May Potter Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for May Potter Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maybelle Place (Kelston)

The speed limit on Maybelle Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maybelle Place connects to Tamariki Avenue to the east. This road provides access to residential properties and is approximately 0.47km in length.</p> <p>Maybelle Place is classified as an Access road under the one network road classification (ONRC). Maybelle Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maybelle Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 743 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maybelle Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tamariki Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maybelle Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maybelle Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mayer Place (Ranui)

The speed limit on Mayer Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mayer Place connects to Ulrich Drive to the west. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Mayer Place is classified as an Access road under the one network road classification (ONRC). Mayer Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mayer Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 370 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mayer Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Urlich Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mayer Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mayer Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Maypark Crescent (Flat Bush)

The speed limit on Maypark Crescent, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maypark Crescent connects to Middlefield Drive to the north and Erica Road to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Maypark Crescent is classified as an Access road under the one network road classification (ONRC). Maypark Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maypark Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Maypark Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Middlefield Drive: 50km/h (proposed 30km/h)</li> <li>Erica Road: 50km/h (proposed 30km/h)</li> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Maypark Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maypark Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mcannalley Street (Manurewa East)

The speed limit on Mcannalley Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mcannalley Street connects to Scotts Road to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.79km in length.</p> <p>Mcannalley Street is classified as a Secondary Collector road under the one network road classification (ONRC). Mcannalley Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: one serious crash, seven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mcannalley Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mcannalley Street has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Scotts Road: 50km/h (proposed 30km/h)</li> <li>• Great South Road: 50km/h (no proposed change)</li> <li>• Lincoln Road: 50km/h (proposed 30km/h)</li> <li>• Fleming Street: 50km/h (proposed 30km/h)</li> <li>• Ellen Street: 50km/h (proposed 30km/h)</li> <li>• Browning Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mcannalley Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mcannalley Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McDougall Street (Manurewa East)

The speed limit on McDougall Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McDougall Street connects to Lincoln Road to the west and Myers Road to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>McDougall Street is classified as an Access road under the one network road classification (ONRC). McDougall Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McDougall Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 343 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of McDougall Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lincoln Road: 50km/h (proposed 30km/h)</li> <li>Myers Road: 50km/h (proposed 30km/h)</li> <li>Bowen Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps McDougall Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McDougall Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McGreal Place (Weymouth)

The speed limit on McGreal Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McGreal Place connects to Taitimu Drive to the south. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>McGreal Place is classified as an Access road under the one network road classification (ONRC). McGreal Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McGreal Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 958 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McGreal Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps McGreal Place has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McGreal Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mcllroy Avenue (Hillsborough)

The speed limit on Mcllroy Avenue, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mcllroy Avenue connects to Carlton Street to the west. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Mcllroy Avenue is classified as an Access road under the one network road classification (ONRC). Mcllroy Avenue is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mcllroy Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Carlton Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mcllroy Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for McIlroy Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McInnes Road (Weymouth)

The speed limit on McInnes Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McInnes Road connects to Hazards Road to the east and Beach Road to the west. This road provides access to residential properties and is approximately 0.49km in length.</p> <p>McInnes Road is classified as an Access road under the one network road classification (ONRC). McInnes Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McInnes Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McInnes Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hazards Road: 50km/h (proposed 30km/h)</li> <li>• Beach Road: 50km/h (proposed 30km/h)</li> <li>• Ocean View Road: 50km/h (proposed 30km/h)</li> <li>• Lane Road: 50km/h (proposed 30km/h)</li> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps McInnes Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McInnes Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mclennan Road (Mt Wellington)

The speed limit on Mclennan Road, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mclennan Road connects to Panama Road to the north and Panama Road to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Mclennan Road is classified as an Access road under the one network road classification (ONRC). Mclennan Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mclennan Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mclennan Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Panama Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mclennan Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McLennan Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McLeod Road (Weymouth)

The speed limit on McLeod Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McLeod Road connects to Greers Road to the east and Domain Road to the west. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>McLeod Road is classified as an Access road under the one network road classification (ONRC). McLeod Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McLeod Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McLeod Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Greers Road: 50km/h (proposed 30km/h)</li> <li>• Domain Road: 50km/h (proposed 30km/h)</li> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> <li>• Suwyn Place: 50km/h (proposed 30km/h)</li> <li>• Lane Road: 50km/h (proposed 30km/h)</li> <li>• Beach Road : 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps McLeod Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McLeod Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McLeod Road (Te Atatu South)

The speed limit on McLeod Road, Te Atatu South, between Te Atatu Road and the eastern end of McLeod Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McLeod Road connects to Great North Road to the south. This road provides access to residential properties and is approximately 0.89 km in length.</p> <p>McLeod Road is classified as a primary collector road under the one network road classification (ONRC). McLeod Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records eleven crashes between 2016 and 2020: three minor and eight non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4311 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of McLeod Road has a mean operating speed in the range of 35-39 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Riverglade Parkway: 50 km/h (proposed 30 km/h)</li> <li>Finlow Drive: 50 km/h (proposed 30 km/h)</li> <li>Glynnbrooke Street: 50 km/h (proposed 30 km/h)</li> <li>Bodi Place: 50 km/h (proposed 30 km/h)</li> <li>Fowey Avenue: 50 km/h (proposed 30 km/h)</li> <li>Te Atatu Road: 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps McLeod Road has the following information:

- Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**
- The Infrastructure Risk Rating Score is 1.70 For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for McLeod Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that McLeod Road is a Primary Collector Road, that is not the intended function for this section of McLeod Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – McMillan Place (Mellons Bay)

The speed limit on McMillan Place, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McMillan Place connects to Paiseley Street to the south. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>McMillan Place is classified as an Access road under the one network road classification (ONRC). McMillan Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McMillan Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane(3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1032 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McMillan Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Paisley Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps McMillan Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for McMillan Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.



## Speed Limit Review – Mellons Bay Road (Mellons Bay)

The speed limit on Mellons Bay Road, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mellons Bay Road connects to Ridge Road to the west. This road provides access to residential properties and is approximately 1.15km in length.</p> <p>Mellons Bay Road is classified as a Primary collector road under the one network road classification (ONRC). Mellons Bay Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirteen crashes between 2016 and 2020: two serious crashes, three minor crashes, eight non-injury crashes. This Resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mellons Bay Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3861 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mellons Bay Road has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Picton Street: 50km/h (no proposed change)</li> <li>• Cheriton Road: 50km/h (proposed 30km/h)</li> <li>• Paisley Street: 50km/h (proposed 30km/h)</li> <li>• Beach Road: 50km/h (no proposed change)</li> <li>• Seymour Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mellons Bay Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 2.35. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mellons Bay Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Mellons Bay Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Melody Belle Street (Karaka)

The speed limit on Melody Belle Street, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Melody Belle Street connects to Hayfield Way to the east and Ockhams Street to the west. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Melody Belle Street is classified as an Access road under the one network road classification (ONRC). Melody Belle Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Melody Belle Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Melody Belle Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hayfield Way: 50km/h (proposed 30km/h)</li> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Melody Belle Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Melody Belle Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Melody Lane (Otahuhu)

The speed limit on Melody Lane, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Melody Lane connects to Harmony Avenue to the east. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Melody Lane is classified as an Access road under the one network road classification (ONRC). Melody Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Melody Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 369 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Melody Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Harmony Avenue: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Melody Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Melody Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Merani Street (Narrow Neck)

The speed limit on Merani Street, Narrow Neck has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Merani Street connects to Montgomery Avenue to the north and Old Lake Road to the south. This road provides access to residential properties and is approximately 0.58km in length.</p> <p>Merani Street is classified as an Access road under the one network road classification (ONRC). Merani Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two minor crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Merani Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 205 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Merani Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Montgomery Avenue: 50km/h (proposed 30km/h)</li> <li>Old Lake Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Merani Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Merani Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Merchant Avenue (Te Atatu South)**

The speed limit on Merchant Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Merchant Avenue connects to Jaemont Avenue to the north and Lyndhurst Road to the south. This road provides access to residential properties and is approximately 0.24 km in length.</p> <p>Merchant Avenue is classified as a secondary collector road under the one network road classification (ONRC). Merchant Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor injury. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1920 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Merchant Avenue has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Jaemont Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Lyndhurst Road: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Merchant Avenue has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium**
- o The Infrastructure Risk Rating Score is 2.30 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Merchant Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Meridian Court (Oteha)

The speed limit on Meridian Court, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Meridian Court connects to Medallion Drive to the east. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Meridian Court is classified as an Access road under the one network road classification (ONRC). Meridian Court is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Meridian Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5985 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Meridian Court has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Medallion Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Meridian Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Meridian Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Merlot Lane (Pukekohe)

The speed limit on Merlot Lane, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Merlot Lane connects to Puriri Road to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Merlot Lane is classified as an Access road under the one network road classification (ONRC). Merlot Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Merlot Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Merlot Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Puriri Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Merlot Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Merlot Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Merville Avenue (Te Atatu South)

The speed limit on Merville Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Merville Avenue connects to Lyndhurst Road to the south. This road provides access to residential properties and is approximately 0.17 km in length.</p> <p>Merville Avenue is classified as an access road under the one network road classification (ONRC). Merville Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 233 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Merville Avenue has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lyndhurst Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Merville Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Merville Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Middlefield Drive (Flat Bush)

The speed limit on Middlefield Drive, Flat Bush, between Cyril French Drive and Baverstock Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Middlefield Drive connects to Kilkenny Drive to the north and Baverstock Road to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Middlefield Drive is classified as a Primary Collector road under the one network road classification (ONRC). Middlefield Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Middlefield Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5756 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Middlefield Drive has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kilkenny Drive: 50km/h (no proposed change)</li> <li>• Baverstock Road: 50km/h (proposed 30km/h)</li> <li>• Heyington Way: 50km/h (no proposed change)</li> <li>• Kaseng Place: 50km/h (no proposed change)</li> <li>• Point View Drive: 50km/h (no proposed change)</li> <li>• Dunloy Place: 50km/h (no proposed change)</li> <li>• Gilford Place: 50km/h (no proposed change)</li> <li>• Glastry Close: 50km/h (no proposed change)</li> <li>• Rialto Court: 50km/h (no proposed change)</li> <li>• Willowbank Court: 50km/h (no proposed change)</li> <li>• Gracechurch Drive: 50km/h (no proposed change)</li> <li>• Barcaldine Road: 50km/h (no proposed change)</li> <li>• Maybole Drive: 50km/h (no proposed change)</li> <li>• Cyril French Drive: 50km/h (proposed 30km/h)</li> <li>• Bronwylan Drive: 50km/h (proposed 30km/h)</li> <li>• Pikao Place: 50km/h (no proposed change)</li> <li>• Amon Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Middlefield Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.48. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Middlefield Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Middlefield Drive is a Primary Collector Road, that is not the intended function of this section of Middlefield Drive.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mildmay Road (Henderson)

The speed limit on Mildmay Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mildmay Road connects to Mawney Road to the west and Harrington Road to the north. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Mildmay Road is classified as an Access road under the one network road classification (ONRC). Mildmay Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one minor crash, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mildmay Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 217 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mildmay Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mawney Road: 50km/h (proposed 30km/h)</li> <li>Harrington Road: 50km/h (proposed 30km/h)</li> <li>Larissa Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mildmay Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mildmay Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Millennial Way (Orewa)

The speed limit on Millennial Way, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Millennial Way connects to West Hoe Heights to the south. This road provides access to residential properties and is approximately 0.24km in length.  Millennial Way is classified as an Access road under the one network road classification (ONRC). Millennial Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Millennial Way were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 75 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Millennial Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>West Hoe Heights: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Millennial Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Millennial Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Miller Street (Point Chevalier)

The speed limit on Miller Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Miller Street connects to Berridge Avenue to the west and Point Cheavlier Road to the east. This road provides access to residential properties and is approximately 0.49km in length.</p> <p>Miller Street is classified as a Secondary Collector road under the one network road classification (ONRC). Miller Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Miller Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Miller Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Berridge Avenue: 50 km/h (proposed 30 km/h)</li> <li>Studholme Street: 50 km/h (proposed 30 km/h)</li> <li>Point Chevalier Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Miller Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Miller Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Miro Street (Kelston)

The speed limit on Miro Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Miro Street connects to Taroa Lane to the east and Lynwood Road to the west. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Miro Street is classified as a Secondary Collector road under the one network road classification (ONRC). Miro Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Miro Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 420 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Miro Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Taroa Lane: 50km/h (proposed 30km/h)</li> <li>• Lynwood Road: 50km/h (proposed 30km/h)</li> <li>• Nikau Street: 50km/h (proposed 30km/h)</li> <li>• Koromiko Street: 50km/h (proposed 30km/h)</li> <li>• Hinekohu Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Miro Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Miro Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Miromiro Street (Greenhithe)

The speed limit on Miromiro Street, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Miromiro Street connects to Kyle Road to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Miromiro Street is classified as a Secondary Collector road under the one network road classification (ONRC). Miromiro Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Miromiro Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Miromiro Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> <li>Kunzea Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Miromiro Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Miromiro Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mitchell Street (Blockhouse Bay)

The speed limit on Mitchell Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mitchell Street connects to Connaught Street to the north and Connell Street to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Mitchell Street is classified as a Secondary Collector road under the one network road classification (ONRC). Mitchell Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mitchell Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 494 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mitchell Street has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Connell Street: 50km/h (proposed 30km/h)</li> <li>• Connaught Street: 50km/h (proposed 30km/h)</li> <li>• Mitchell Street: 50km/h (proposed 30km/h)</li> <li>• Barton Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mitchell Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mitchell Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Moko Lane (Greenhithe)

The speed limit on Moko Lane, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Moko Lane connects to Admirals Court Drive to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Moko Lane is classified as an Access road under the one network road classification (ONRC). Moko Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Moko Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Moko Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Admirals Court Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Moko Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Moko Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Moloney Terrace (Pukekohe)

The speed limit on Moloney Terrace, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Moloney Terrace connects to Victoria Street West to the south. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Moloney Terrace is classified as an Access road under the one network road classification (ONRC). Moloney Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Moloney Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Moloney Terrace has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Victoria Street West: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Moloney Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Moloney Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Monkton Close (Greenhithe)

The speed limit on Monkton Close, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Monkton Close connects to Te Wharau Drive to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Monkton Close is classified as an Access road under the one network road classification (ONRC). Monkton Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Monkton Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Monkton Close has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Te Wharau Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Monkton Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Monkton Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Monterey Avenue (Otahuhu)

The speed limit on Monterey Avenue, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Monterey Avenue connects to Fairburn Road to the north. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Monterey Avenue is classified as an Access road under the one network road classification (ONRC). Monterey Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Monterey Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 330 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Monterey Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fairburn Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Monterey Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Monterey Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Montgomery Avenue (Belmont)

The speed limit on Montgomery Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Montgomery Avenue connects to Seacliffe Avenue to the east and Lake Road to the west. This road provides access to residential properties and is approximately 0.56km in length.</p> <p>Montgomery Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Montgomery Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Montgomery Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1777 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Montgomery Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Seacliffe Avenue: 50km/h (proposed 30km/h)</li> <li>Lake Road: 50km/h (no proposed change)</li> <li>Alamein Avenue: 50km/h (proposed 30km/h)</li> <li>Wicklow Road: 50km/h (proposed 30km/h)</li> <li>Merani Street: 50km/h (proposed 30km/h)</li> <li>Hamana Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Montgomery Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Montgomery Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Montessor Place (Mellons Bay)

The speed limit on Montessor Place, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Montessor Place connects to Castleton Drive to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Montessor Place is classified as an Access road under the one network road classification (ONRC). Montessor Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Montessor Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1032 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Montessoro Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Castleton Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Montessoro Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Montessoro Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Montrose Street (Point Chevalier)

The speed limit on Montrose Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Montrose Street connects to Point Chevalier to the east. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Montrose Street is classified as an Access road under the one network road classification (ONRC). Montrose Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Montrose Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Montrose Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Montrose Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.58. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Montrose Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Moselle Avenue (Henderson)

The speed limit on Moselle Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Moselle Avenue connects to Lincoln Road to the west and Waipareira Avenue to the east. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Moselle Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Moselle Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Moselle Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4680 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"
(k) Setting of Speed Limits Rule 2017	The requirements of the Setting of Speed Limits Rule 2017 are met as shown in Table 3
(l) WK Traffic Note 37-Revision 2	The requirements of WK Traffic Note 37-Revision2 are met as shown in Table 3

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Moselle Avenue has a mean operating speed in the range of <30km/h.  According to MegaMaps, the average pick-up and drop-off operating speeds are 22.7km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Lincoln Road: 50km/h (no proposed change)</li> <li>Waipareira Avenue: 50km/h (proposed variable 30 km/h and 50km/h)</li> </ul>
Auckland Transport Vision Zero	The proposed speed limit for this section of Waipareira Avenue will align with Auckland Transports Vision Zero approach

In addition to the factors outlined in Table 1, further relevant information was sought to meet the requirements of WK Traffic Note 37-Revision 2 and the Setting of Speed Limits Rule 2017 as summarised in Table 3 below.

Table 3: Required Information

Required Information	Data & Source
With reference to WK Traffic Note 37-Revision 2, a road controlling authority may set a 40km/h	The requirements of condition "b" are met as follows:

<p>variable speed limit in a school zone under the following conditions:</p> <p>(a) <i>There is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and the traffic on the road outside the school meets at least one of the following conditions:</i></p> <p>(i) <i>The mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(ii) <i>The 85<sup>th</sup> percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(iii) <i>There have been pedestrian, cycle or speed-related crashes near the school in the previous five years; or</i></p> <p>(iv) <i>The school-related activity in condition 5(a) occurs on a main traffic route; or</i></p> <p>(b) <i>There is school-related pedestrians or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside and safe and appropriate traffic engineering measures are installed so that the mean operating speeds of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating</i></p>	<p>A 2021 Annual Survey Report for ACG Sunderland found that in total there were 63 schoolchildren walking on the road outside the school around the schools pick up and drop off hours.</p> <p>Furthermore, according to MegaMaps, the average pick-up and drop-off operating speeds are 22.7km/h.</p>
<p>With reference to the Setting of Speed Limits Rule 2017, a variable speed limit may apply when:</p> <p>(a) <i>The speed limit needs to vary in order to be safe and appropriate; and</i></p> <p>(b) <i>It is necessary to address or manage one or more of the following situations or environments</i></p> <p>(i) <i>Different numbers and types of road users or different traffic movements; or</i></p>	<p>The requirements of condition "a" are met due to the observed activity on the road in front of the school around pick-up and drop-off hours, as specified above. It has been determined that since the walking activity around the school is largely concentrated around pick-up and drop-off hours, a variable speed limit would be suitable.</p> <p>The requirements of condition "b (ii)" are met due to the type of road users during the hours of operation of the proposed variable speed zone being primarily schoolchildren, which is not the</p>

(ii)	The effects of changing traffic volumes, including to ease congestion; or	case outside of the hours of operation for the proposed variable speed zone.
(iii)	For emergency or temporary traffic management; or	
(iv)	A crash risk posed by turning or crossing traffic; or	
(v)	Changing environmental conditions	

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Moselle Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.97. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = Variable 30km/h and 50km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Moselle Avenue, according to MegaMaps, the average pick up and drop off operating speeds, i.e. the operating speeds at times of heightened school-related activity, are less than 30km/h.

As outlined in Table 3, an assessment has been undertaken to determine if the warrant is met for a 40km/h variable speed school zone.

While the conditions required for a variable 40km/h speeds limit are met, Waka Kotahi have indicated that variable 30km/h speed limits would be appropriate if the operating speeds during the times of variable speed limit operation were less than 30km/h and they are notified of the proposal. Waka Kotahi will be notified of this proposal for a variable 30km/h speed limit prior to public consultation.

Due to the existing pick up and drop off operating speeds we have determined a variable 30km/h speed limit during school drop off and pick up times to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Motions Road (Westmere)**

The speed limit on Motions Road, Westmere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Motions Road connects to Old Mill Road to the north and Great North Road to the south. This road provides access to residential properties and is approximately 0.67 km in length.</p> <p>Motions Road is classified as an arterial road under the one network road classification (ONRC). Motions Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4842 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Motions Road has a mean operating speed in the range of 30-34 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Old Mill Road: 50 km/h (proposed 30 km/h)</li> <li>• Great North Road: 50 km/h</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Motions Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 1.58 For urban areas this corresponds to an IRR band of **Low**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Motions Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mozeley Avenue (Devonport)

The speed limit on Mozeley Avenue, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mozeley Avenue connects to Lake Road to the east and Jim Titchener Parade to the west. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Mozeley Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Mozeley Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mozeley Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2172 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mozeley Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lake Road: 50 km/h (no proposed change)</li> <li>Jim Titchener Parade: 50 km/h (no proposed change)</li> <li>Victoria Road between Albert Road and northern end of Victoria Road: 50 km/h (proposed 30 km/h)</li> <li>Cowper Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Mozeley Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Mozeley Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Mozeley Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Muir Avenue (Mangere Bridge)

The speed limit on Muir Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Muir Avenue connects to Wallace Road to the east and Ambury Road to the south. This road provides access to residential properties and is approximately 1.04km in length.</p> <p>Muir Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Muir Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor crash, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Muir Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4116 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Muir Avenue has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Wallace Road: 50km/h (no proposed change)</li> <li>• Ambury Road: 50km/h (proposed 30km/h)</li> <li>• Andes Avenue: 50km/h (proposed 30km/h)</li> <li>• Witla Court: 50km/h (proposed 30km/h)</li> <li>• Yorkton Rise: 50km/h (proposed 30km/h)</li> <li>• Ashcroft Avenue: 50km/h (proposed 30km/h)</li> <li>• Seaforth Avenue: 50km/h (proposed 30km/h)</li> <li>• Dalry Place: 50km/h (proposed 30km/h)</li> <li>• Lindis Place: 50km/h (proposed 30km/h)</li> <li>• Sullivan Avenue: 50km/h (proposed 30km/h)</li> <li>• House Avenue: 50km/h (proposed 30km/h)</li> <li>• Ambury Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Muir Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.

- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Muir Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mural Place (Greenhithe)

The speed limit on Mural Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mural Place connects to Kyle Road to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Mural Place is classified as a Secondary Collector road under the one network road classification (ONRC). Mural Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mural Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mural Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Mural Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mural Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Muripara Avenue (Point Chevalier)

The speed limit on Muripara Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Muripara Avenue connects to Target Street to the north and Walker Road to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Muripara Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Muripara Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Muripara Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Muripara Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Target Street: 50 km/h (proposed 30 km/h)</li> <li>Walker Road: 50 km/h (proposed 30 km/h)</li> <li>Shaftesbury Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Muripara Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Muripara Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Myers Road (Manurewa East)

The speed limit on Myers Road, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Myers Road connects to Scotts Road to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.68km in length.</p> <p>Myers Road is classified as a Secondary Collector road under the one network road classification (ONRC). Myers Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Myers Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2575 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Myers Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Scotts Road: 50km/h (proposed 30km/h)</li> <li>• Great South Road: 50km/h (no proposed change)</li> <li>• Ferguson Street: 50km/h (proposed 30km/h)</li> <li>• Greenmeadows Avenue : 50km/h (proposed 30km/h)</li> <li>• Sterling Avenue: 50km/h (proposed 30km/h)</li> <li>• Lincoln Road: 50km/h (proposed 30km/h)</li> <li>• McDougall Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Myers Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Myers Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Myna Place (Weymouth)

The speed limit on Myna Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Myna Place connects to Silver Creek Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Myna Place is classified as an Access road under the one network road classification (ONRC). Myna Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Myna Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 330 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Myna Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Silver Creek Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Myna Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Myna Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nadine Place (Mangere Bridge)

The speed limit on Nadine Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nadine Place connects to Seaforth Avenue to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Nadine Place is classified as a Access road under the one network road classification (ONRC). Nadine Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nadine Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nadine Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Seaforth Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nadine Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nadine Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nairn Place (Otara)

The speed limit on Nairn Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nairn Place connects to Tyrone Street to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Nairn Place is classified as an Access road under the one network road classification (ONRC). Nairn Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nairn Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nairn Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tyrone Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nairn Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nairn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nelson Street (Otahuhu)

The speed limit on Nelson Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nelson Street connects to Tamaki Avenue to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Nelson Street is classified as an Access road under the one network road classification (ONRC). Nelson Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nelson Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nelson Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tamaki Avenue: 50km/h (proposed 30km/h)</li> <li>Great southRoad: 50km/h (no proposed change)</li> <li>Sturges Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nelson Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nelson Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nephrite Lane (Henderson)

The speed limit on Nephrite Lane, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nephrite Lane connects to Stephen Avenue to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Nephrite Lane is classified as an Access road under the one network road classification (ONRC). Nephrite Lane is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nephrite Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nephrite Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Stephen Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nephrite Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nephrite Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Netherlands Avenue (Kelston)

The speed limit on Netherlands Avenue, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Netherlands Avenue connects to Archibald Road to the east and Cartwright Road to the west. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Netherlands Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Netherlands Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Netherlands Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1594 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Netherlands Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Archibald Road: 50km/h (proposed 30km/h)</li> <li>Cartwright Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Netherlands Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Netherlands Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Netherlands Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Neville Street (Point Chevalier)

The speed limit on Neville Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Neville Street connects to Target Street to the north and Walker Road to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Neville Street is classified as a Secondary Collector road under the one network road classification (ONRC). Neville Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Neville Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Neville Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Target Street: 50 km/h (proposed 30 km/h)</li> <li>• Walker Road: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Neville Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Neville Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nevis Place (Mangere)

The speed limit on Nevis Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nevis Place connects to Friesian Drive to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Nevis Place is classified as an Access road under the one network road classification (ONRC). Nevis Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nevis Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nevis Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Friesian Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nevis Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nevis Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Newbegin Place (Weymouth)

The speed limit on Newbegin Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newbegin Place connects to Footwide Place to the south and Settlers Cove to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Newbegin Place is classified as an Access road under the one network road classification (ONRC). Newbegin Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Newbegin Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Newbegin Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Footwide Place: 50km/h (proposed 30km/h)</li> <li>• Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Newbegin Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Newbegin Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Newell Street (Point Chevalier)

The speed limit on Newell Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newell Street connects to Walford Road to the west. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Newell Street is classified as an Access road under the one network road classification (ONRC). Newell Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Newell Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 300 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Newell Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Walford Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Newell Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Newell Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Newland Grove (Henderson)

The speed limit on Newland Grove, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newland Grove connects to Rathgar Road to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Newland Grove is classified as an Access road under the one network road classification (ONRC). Newland Grove is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Newland Grove were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Newland Grove has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Rathgar Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Newland Grove has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Newland Grove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ngaio Street (Otahuhu)

The speed limit on Ngaio Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ngaio Street connects to Church Street to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Ngaio Street is classified as a Secondary Collector road under the one network road classification (ONRC). Ngaio Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ngaio Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 522 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ngaio Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>Great south Road: 50km/h (no proposed change)</li> <li>Sturges Avenue: 50km/h (proposed 30km/h)</li> <li>Tamaki Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ngaio Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ngaio Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ngatira Place (Clendon Park)

The speed limit on Ngatira Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ngatira Place connects to Finlayson Avenue to the west. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Ngatira Place is classified as an Access road under the one network road classification (ONRC). Ngatira Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ngatira Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ngatira Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ngatira Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ngatira Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nicholas Gibbons Drive (Weymouth)

The speed limit on Nicholas Gibbons Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nicholas Gibbons Drive connects to Etherton Drive to the east and Ebanjane Way to the south. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Nicholas Gibbons Drive is classified as an Access road under the one network road classification (ONRC). Nicholas Gibbons Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: two minor crashes, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nicholas Gibbons Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nicholas Gibbons Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> <li>Ebanjane Way: 50km/h (proposed 30km/h)</li> <li>Mark Edgar Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nicholas Gibbons Drive has the following information:

- Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nicholas Gibbons Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nicola Place (Mangere)

The speed limit on Nicola Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Nicola Place connects to Friesian Drive to the west. This road provides access to residential properties and is approximately 0.19km in length.  Nicola Place is classified as an Access road under the one network road classification (ONRC). Nicola Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Nicola Place were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nicola Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Friesian Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nicola Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nicola Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nikau Street (Kelston)

The speed limit on Nikau Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nikau Street connects to Lynwood Road to the west and Great North Road to the south. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Nikau Street is classified as a Primary Collector road under the one network road classification (ONRC). Nikau Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: four minor crashes, five non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nikau Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1329 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nikau Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> <li>Great North Road : 50km/h (no proposed change)</li> <li>Rimu Street: 50km/h (proposed 30km/h)</li> <li>Miro Street: 50km/h (proposed 30km/h)</li> <li>Koromiko Street: 50km/h (proposed 30km/h)</li> <li>Kuaka Place: 50km/h (proposed 30km/h)</li> <li>Queen Mary Avenue: 50km/h (proposed 30km/h)</li> <li>Kelston Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nikau Street has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nikau Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Nikau Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nile Road (Kelston)

The speed limit on Nile Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nile Road connects to Tamariki Avenue to the north and Vanguard Road to the east. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Nile Road is classified as a Secondary Collector road under the one network road classification (ONRC). Nile Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nile Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 535 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nile Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Vanguard Road: 50km/h (proposed 30km/h)</li> <li>• Vanguard Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nile Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nile Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nimstedt Avenue (Oteha)

The speed limit on Nimstedt Avenue, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nimstedt Avenue connects to Sunvista Avenue to the north and Fields Parade to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Nimstedt Avenue is classified as an Access road under the one network road classification (ONRC). Nimstedt Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nimstedt Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 592 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nimstedt Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sunvista Avenue: 50km/h (proposed 30km/h)</li> <li>Fields Parade: 50km/h (proposed 30km/h)</li> <li>Gleanor Avenue: 50km/h (proposed 30km/h)</li> <li>Marbella Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nimstedt Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nimstedt Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nixon Avenue (Otahuhu)

The speed limit on Nixon Avenue, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nixon Avenue connects to Church Street to the east and Great South Road to the west. This road provides access to residential properties and is approximately 0.46km in length.</p> <p>Nixon Avenue is classified as an Access road under the one network road classification (ONRC). Nixon Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one minor crash, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nixon Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nixon Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>• Great southRoad: 50km/h (no proposed change)</li> <li>• Sturges Avenue: 50km/h (proposed 30km/h)</li> <li>• Tamaki Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Nixon Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nixon Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nola Crescent (Otaru)

The speed limit on Nola Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nola Crescent connects to Cobham Crescent to the north. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Nola Crescent is classified as an Access road under the one network road classification (ONRC). Nola Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nola Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nola Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nola Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nola Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Normandy Place (Henderson)

The speed limit on Normandy Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Normandy Place connects to Glen Norman Avenue to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Normandy Place is classified as an Access road under the one network road classification (ONRC). Normandy Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Normandy Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 97 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Normandy Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Glen Norman Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Normandy Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Normandy Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Northbrook Close (Greenhithe)

The speed limit on Northbrook Close, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Northbrook Close connects to Kyle Road to the west. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Northbrook Close is classified as a Secondary Collector road under the one network road classification (ONRC). Northbrook Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Northbrook Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Northbrook Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Northbrook Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Northbrook Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Northcross Drive (Oteha)

The speed limit on Northcross Drive, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Northcross Drive connects to East Coast Road to the east and Ponderosa Drive to the south. This road provides access to residential properties and is approximately 1.93km in length.</p> <p>Northcross Drive is classified as an Access road under the one network road classification (ONRC). Northcross Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Northcross Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Northcross Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• East Coast Road: 50km/h (no proposed change)</li> <li>• Ponderosa Drive: 50km/h (proposed 30km/h)</li> <li>• Margaret Henry Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Northcross Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Northcross Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Norton Place (Mangere)

The speed limit on Norton Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Norton Place connects to Staverton Crescent to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Norton Place is classified as an Access road under the one network road classification (ONRC). Norton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Norton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Norton Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Staverton Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Norton Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Norton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Norval Road (Henderson)

The speed limit on Norval Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Norval Road connects to Pinedale Place to the north and Lincoln Road to the east. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Norval Road is classified as an Access road under the one network road classification (ONRC). Norval Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Norval Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 948 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Norval Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pinedale Place: 50km/h (proposed 30km/h)</li> <li>• Lincoln Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Norval Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Norval Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nukumea Common (Orewa)

The speed limit on Nukumea Common, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nukumea Common connects to Centreway Road to the east. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Nukumea Common is classified as a Secondary Collector road under the one network road classification (ONRC). Nukumea Common is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nukumea Common were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 310 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Nukumea Common has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Centreway Road between Puriri Avenue and West Hoe Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Nukumea Common has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.09. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Nukumea Common, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oakhaven Place (Ranui)

The speed limit on Oakhaven Place, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oakhaven Place connects to Glen Road to the north. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Oakhaven Place is classified as an Access road under the one network road classification (ONRC). Oakhaven Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oakhaven Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oakhaven Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Glen Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Oakhaven Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oakhaven Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oakville Avenue (Flat Bush)

The speed limit on Oakville Avenue, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oakville Avenue connects to Coachman Drive to the north and Baverstock Road to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Oakville Avenue is classified as an Access road under the one network road classification (ONRC). Oakville Avenue is a two-way, Divided - traversable road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oakville Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided - traversable</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Oakville Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Coachman Drive: 50km/h (proposed 30km/h)</li> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> <li>Bridgefield Crescent: 50km/h (proposed 30km/h)</li> <li>Stonebrook Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Oakville Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.35. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oakville Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ocean View Road (Weymouth)

The speed limit on Ocean View Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ocean View Road connects to McInnes Road to the north and Roys Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Ocean View Road is classified as an Access road under the one network road classification (ONRC). Ocean View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ocean View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ocean View Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• McInnes Road: 50km/h (proposed 30km/h)</li> <li>• Roys Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ocean View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ocean View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ocean View Terrace (Orewa)

The speed limit on Ocean View Terrace, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ocean View Terrace connects to Panorama Heights to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Ocean View Terrace is classified as an Access road under the one network road classification (ONRC). Ocean View Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ocean View Terrace were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 15 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ocean View Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Panorama Heights: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ocean View Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ocean View Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oceania Place (Mellons Bay)

The speed limit on Oceania Place, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oceania Place connects to Seymour Road to the west. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Oceania Place is classified as an Access road under the one network road classification (ONRC). Oceania Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oceania Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oceania Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Seymour Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Oceania Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oceania Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ockhams Street (Karaka)

The speed limit on Ockhams Street, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ockhams Street connects to Tumu Road to the north and Hayfield Way to the south. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Ockhams Street is classified as an Access road under the one network road classification (ONRC). Ockhams Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ockhams Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ockhams Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tumu Road: 50km/h (proposed 30km/h)</li> <li>Hayfield Way: 50km/h (proposed 30km/h)</li> <li>Gingernut Place: 50km/h (proposed 30km/h)</li> <li>Melody Belle Street: 50km/h (proposed 30km/h)</li> <li>Vespa Road: 50km/h (proposed 30km/h)</li> <li>Toporoa Street: 50km/h (proposed 30km/h)</li> <li>Songline Road: 50km/h (proposed 30km/h)</li> <li>Cloud Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ockhams Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ockhams Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – O’connor Street (Otara)

The speed limit on Oconnor Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oconnor Street connects to Bairds Road to the north and Waimate Street to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Oconnor Street is classified as a Secondary Collector road under the one network road classification (ONRC). Oconnor Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA’s Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oconnor Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1383 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oconnor Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bairds Road: 50km/h (proposed 30km/h)</li> <li>• Waimate Street: 50km/h (proposed 30km/h)</li> <li>• Flat Bush Road: 50km/h (proposed 30km/h)</li> <li>• Kurt Lane: 50km/h (proposed 30km/h)</li> <li>• Sandbrook Avenue: 50km/h (proposed 30km/h)</li> <li>• Vickerman Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Oconnor Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oconnor Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Old Mill Road (Westmere)

The speed limit on Old Mill Road, Westmere, between Garnet Road and Motions Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Old Mill Road connects to Bullock Track to the east and Motions Road to the south. This road provides access to residential properties and is approximately 0.69 km in length.</p> <p>Old Mill Road is classified as a primary collector road under the one network road classification (ONRC). Old Mill Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: three minor and three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 10074 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Old Mill Road has a mean operating speed in the range of 30-34 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Motions Road: 50 km/h (proposed 30 km/h)</li> <li>Garnet Road: 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Old Mill Road has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium**
- The Infrastructure Risk Rating Score is 2.00 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Old Mill Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oliver Street (Point Chevalier)

The speed limit on Oliver Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oliver Street connects to Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Oliver Street is classified as a Secondary Collector road under the one network road classification (ONRC). Oliver Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oliver Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 728 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oliver Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>• Walford Road: 50 km/h (proposed 30 km/h)</li> <li>• Bungalow Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Lynch Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Oliver Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oliver Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Olivia Road (Pukekohe)

The speed limit on Olivia Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Olivia Road connects to Rainsford Road to the north and Perla Road to the south. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Olivia Road is classified as a Access road under the one network road classification (ONRC). Olivia Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Olivia Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Olivia Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rainsford Road: 50km/h (proposed 30km/h)</li> <li>Perla Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Olivia Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Olivia Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Orewa Heights Crescent (Orewa)

The speed limit on Orewa Heights Crescent, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Orewa Heights Crescent connects to West Hoe Heights to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Orewa Heights Crescent is classified as an Access road under the one network road classification (ONRC). Orewa Heights Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Orewa Heights Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 97 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Orewa Heights Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>West Hoe Heights: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Orewa Heights Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests km/h as the safe and appropriate speed for Orewa Heights Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Orly Avenue (Mangere)

The speed limit on Orly Avenue, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Orly Avenue connects to Bader Road to the north and Thomas Road to the south. This road provides access to residential properties and is approximately 0.63km in length.</p> <p>Orly Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Orly Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eighteen crashes between 2016 and 2020: one serious crash, three minor crashes, fourteen non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Orly Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8927 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Orly Avenue has a mean operating speed in the range of 37.9km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bader Road: 50km/h (no proposed change)</li> <li>Thomas Road: 50km/h (proposed 30km/h)</li> <li>Cape Road: 50km/h (proposed 30km/h)</li> <li>Killington Crescent: 50km/h (proposed 30km/h)</li> <li>Staverton Crescent: 50km/h (proposed 30km/h)</li> <li>Waddon Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Orly Avenue has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.67. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Orly Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Orly Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oroua Place (Otara)

The speed limit on Oroua Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oroua Place connects to Pearl Baker Drive to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Oroua Place is classified as an Access road under the one network road classification (ONRC). Oroua Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oroua Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oroua Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Pearl Baker Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Oroua Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oroua Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Orwell Road (Greenhithe)

The speed limit on Orwell Road, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Orwell Road connects to Kyle Road to the north and Greenhithe Road to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Orwell Road is classified as an Access road under the one network road classification (ONRC). Orwell Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Orwell Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Orwell Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> <li>Te Wharau Drive: 50km/h (proposed 30km/h)</li> <li>Louvain Place: 50km/h (proposed 30km/h)</li> <li>Greenhithe Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Orwell Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Orwell Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Osprey Street (Pakuranga)

The speed limit on Osprey Street, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Osprey Street connects to Tiraumea Drive to the south. This road provides access to residential properties and is approximately 0.15 km in length.</p> <p>Osprey Street is classified as an access road under the one network road classification (ONRC). Osprey Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 180 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Osprey Street has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Osprey Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Osprey Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oswald Close (Flat Bush)

The speed limit on Oswald Close, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oswald Close connects to Cyril French Drive to the north and Karson Place to the north. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Oswald Close is classified as an Access road under the one network road classification (ONRC). Oswald Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oswald Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Oswald Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> <li>Karson Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Oswald Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Oswald Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Overend Court (Pukekohe)

The speed limit on Overend Court, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Overend Court connects to Green Lane to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Overend Court is classified as an Access road under the one network road classification (ONRC). Overend Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Overend Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Overend Court has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Green Lane: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Overend Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Overend Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Owens Road (Devonport)

The speed limit on Owens Road, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Owens Road connects to Lake Road to the east and Victoria Road to the west. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Owens Road is classified as a Secondary Collector road under the one network road classification (ONRC). Owens Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Owens Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 619 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Owens Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lake Road: 50 km/h (no proposed change)</li> <li>Victoria Road between Albert Road and northern end of Victoria Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Owens Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Owens Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review School – Raewyn Place (Pakuranga)

The speed limit on Raewyn Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Raewyn Place connects to Edgewater Drive to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Raewyn Place is classified as a Access road under the one network road classification (ONRC). Raewyn Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Raewyn Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Raewyn Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Edgewater Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Raewyn Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Raewyn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rainsford Road (Pukekohe)

The speed limit on Rainsford Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rainsford Road connects to Taepu Road to the west. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Rainsford Road is classified as an Access road under the one network road classification (ONRC). Rainsford Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rainsford Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rainsford Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Taepu Road: 50 km/h (proposed 30 km/h)</li> <li>• Parton Road: 50 km/h (proposed 30 km/h)</li> <li>• Olivia Road: 50 km/h (proposed 30 km/h)</li> <li>• Tuuhura Road: 50 km/h (proposed 30 km/h)</li> <li>• Perla Road: 50 km/h (proposed 30 km/h)</li> <li>• Victoria Street West: 50 km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rainsford Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rainsford Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Raki Street (Pukekohe)

The speed limit on Raki Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Raki Street connects to Huamanu Street to the north and Hemopo Street to the south. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Raki Street is classified as an Access road under the one network road classification (ONRC). Raki Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Raki Street were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Raki Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Huamanu Street: 50 km/h (proposed 30 km/h)</li> <li>Hemopo Street: 50 km/h (proposed 30 km/h)</li> <li>Tawhiti Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Raki Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Raki Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rama Road (Point Chevalier)

The speed limit on Rama Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rama Road connects to Walker Road to the north and Smale Street to the south. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Rama Road is classified as an Access road under the one network road classification (ONRC). Rama Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rama Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rama Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Walker Road: 50 km/h (proposed 30 km/h)</li> <li>Smale Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rama Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rama Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ramesh Place (Pukekohe)

The speed limit on Ramesh Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ramesh Place connects to Ranchod Terrace to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Ramesh Place is classified as an Access road under the one network road classification (ONRC). Ramesh Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ramesh Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ramesh Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ranchod Terrace: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ramesh Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ramesh Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ranchod Terrace (Pukekohe)

The speed limit on Ranchod Terrace, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ranchod Terrace connects to Ward Street to the north. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Ranchod Terrace is classified as an Access road under the one network road classification (ONRC). Ranchod Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ranchod Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ranchod Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Ward Street: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ranchod Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ranchod Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Raoriki Road (Pukekohe)

The speed limit on Raoriki Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Raoriki Road connects to Jutland Road to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Raoriki Road is classified as an Access road under the one network road classification (ONRC). Raoriki Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Raoriki Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Raoriki Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jutland Road: 50 km/h (proposed 30 km/h)</li> <li>Whakapono Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Raoriki Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Raoriki Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rathgar Road (Henderson)

The speed limit on Rathgar Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rathgar Road connects to Universal Drive to the north and Swanson Road to the south. This road provides access to residential properties and is approximately 1.62km in length.</p> <p>Rathgar Road is classified as an Arterial road under the one network road classification (ONRC). Rathgar Road is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty five crashes between 2016 and 2020: two serious crashes, nine minor crashes, fourteen non-injury crashes. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rathgar Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8034 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rathgar Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Universal Drive: 50km/h (no proposed change)</li> <li>• Swanson Road: 50km/h (no proposed change)</li> <li>• Ti Nana Crescent: 50km/h (proposed 30km/h)</li> <li>• Edwards Avenue: 50km/h (proposed 30km/h)</li> <li>• Maurice Borich Place: 50km/h (proposed 30km/h)</li> <li>• Larnoch Road: 50km/h (proposed 30km/h)</li> <li>• Pomaria Road: 50km/h (proposed 30km/h)</li> <li>• Larissa Avenue: 50km/h (proposed 30km/h)</li> <li>• Harrington Road: 50km/h (proposed 30km/h)</li> <li>• Newland Grove: 50km/h (proposed 30km/h)</li> <li>• Longburn Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rathgar Road has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.

- o The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Rathgar Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Rathgar Road is an Arterial Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ravine Lane (Oteha)

The speed limit on Ravine Lane, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ravine Lane connects to John Jennings Drive to the east. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Ravine Lane is classified as an Access road under the one network road classification (ONRC). Ravine Lane is a two-way, Two lane undivided road. There are no pedestrian amenities and. There are no pedestrian amenities, on-street parking and cyclist amenities along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ravine Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 314 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ravine Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>John Jennings Drive: 50km/h (proposed 30km/h)</li> <li>Andersons Road: 50km/h (proposed 30km/h)</li> <li>Canyon Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ravine Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ravine Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Raymond Street (Point Chevalier)

The speed limit on Raymond Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Raymond Street connects to Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.27km in length.</p> <p>Raymond Street is classified as a Secondary Collector road under the one network road classification (ONRC). Raymond Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Raymond Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 832 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Raymond Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>• Harbour View Road: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Raymond Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Raymond Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rebecca Rise (Weymouth)

The speed limit on Rebecca Rise, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rebecca Rise connects to Taitimu Drive to the north. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Rebecca Rise is classified as an Access road under the one network road classification (ONRC). Rebecca Rise is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rebecca Rise were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 958 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rebecca Rise has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rebecca Rise has the following information:

- o Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rebecca Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Redcoat Place (Cockle Bay)**

The speed limit on Redcoat Place, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Redcoat Place connects to Advene Road to the south. This road provides access to residential properties and is approximately 0.06 km in length.</p> <p>Redcoat Place is classified as an access road under the one network road classification (ONRC). Redcoat Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 291 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Redcoat Place has a mean operating speed in the range of <30 km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Advene Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Redcoat Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.17 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Redcoat Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Reipae Street (Stonefields)

The speed limit on Reipae Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Reipae Street connects to Tihi Street to the west and Tauoma Crescent to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Reipae Street is classified as an Access road under the one network road classification (ONRC). Reipae Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Reipae Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 450 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Reipae Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Tauoma Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Reipae Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Reipae Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Reno Way (Flat Bush)

The speed limit on Reno Way, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Reno Way connects to Kestev Drive to the north. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Reno Way is classified as an Access road under the one network road classification (ONRC). Reno Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Reno Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 6 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Reno Way has a mean operating speed in the range of <31km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kestev Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Reno Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 41km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 41km/h as the safe and appropriate speed for Reno Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Reremanu Place (Weymouth)

The speed limit on Reremanu Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Reremanu Place connects to Waimahia Avenue to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Reremanu Place is classified as an Access road under the one network road classification (ONRC). Reremanu Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Reremanu Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Reremanu Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Reremanu Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Reremanu Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rerewai Place (Kelston)

The speed limit on Rerewai Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rerewai Place connects to Sabulite Road between Butterworth Drive and the northern end to the west. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Rerewai Place is classified as an Access road under the one network road classification (ONRC). Rerewai Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rerewai Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 235 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rerewai Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Sabulite Road between Butterworth Drive and the northern end: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rerewai Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rerewai Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Revell Court (Pukekohe)

The speed limit on Revell Court, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Revell Court connects to Cooper Street to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Revell Court is classified as an Access road under the one network road classification (ONRC). Revell Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Revell Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Revell Court has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cooper Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Revell Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Revell Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rewa Rewa Lane (Orewa)

The speed limit on Rewa Rewa Lane, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rewa Rewa Lane connects to Puriri Boulevard to the north. This road provides access to residential properties and is approximately 0.01km in length.</p> <p>Rewa Rewa Lane is classified as an Access road under the one network road classification (ONRC). Rewa Rewa Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rewa Rewa Lane were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rewa Rewa Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Puriri Boulevard: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rewa Rewa Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rewa Rewa Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rewa Street (Kelston)

The speed limit on Rewa Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rewa Street connects to Hinekohu Street to the east and Lynwood Road to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Rewa Street is classified as a Secondary Collector road under the one network road classification (ONRC). Rewa Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rewa Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1920 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rewa Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hinekohu Street: 50km/h (proposed 30km/h)</li> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rewa Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rewa Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Reydon Place (Cockle Bay)**

The speed limit on Reydon Place, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Reydon Place connects to Sandspit Road to the south. This road provides access to residential properties and is approximately 0.15 km in length.  Reydon Place is classified as an access road under the one network road classification (ONRC). Reydon Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Road Name were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Reydon Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Sandspit Road: 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Reydon Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Reydon Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Reyland Close (Weymouth)

The speed limit on Reyland Close, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Reyland Close connects to Etherton Drive to the south. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Reyland Close is classified as an Access road under the one network road classification (ONRC). Reyland Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Reyland Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Reyland Close has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Reyland Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Reyland Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rickards Place (Kelston)

The speed limit on Rickards Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rickards Place connects to Lynwood Road to the west. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Rickards Place is classified as an Access road under the one network road classification (ONRC). Rickards Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rickards Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 232 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rickards Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Lynwood Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rickards Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rickards Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rimu Street (Kelston)

The speed limit on Rimu Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rimu Street connects to Rata Street to the east and to the west. This road provides access to residential properties and is approximately 1.05km in length.</p> <p>Rimu Street is classified as a Primary Collector road under the one network road classification (ONRC). Rimu St is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty five crashes between 2016 and 2020: seven minor crashes, eighteen non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rimu Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8948 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rimu Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rata Street: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rimu Street has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rimu Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Rimu Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Riverglade Parkway (Te Atatu South)**

The speed limit on Riverglade Parkway, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Riverglade Parkway connects to McLeod Road to the north. This road provides access to residential properties and is approximately 0.41 km in length.</p> <p>Riverglade Parkway is classified as an access road under the one network road classification (ONRC). Riverglade Parkway is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Riverglade Parkway has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>McLeod Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Riverglade Parkway has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.00 For urban areas this corresponds to an IRR band of **Low Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Riverglade Parkway, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Riverina Avenue (Pakuranga)

The speed limit on Riverina Avenue, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Riverina Avenue connects to Edgewater Drive to the east. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Riverina Avenue is classified as a Access road under the one network road classification (ONRC). Riverina Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Riverina Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Riverina Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Edgewater Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Riverina Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Riverina Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Riverview Road (Kelston)

The speed limit on Riverview Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Riverview Road connects to Lynwood Road to the east. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Riverview Road is classified as an Access road under the one network road classification (ONRC). Riverview Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Riverview Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 320 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Riverview Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lynwood Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Riverview Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Riverview Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Roanoke Way (Albany)

The speed limit on Roanoke Way, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Roanoke Way connects to Vinewood Drive to the south. This road provides access to residential properties and is approximately 0.50km in length.</p> <p>Roanoke Way is classified as a Access road under the one network road classification (ONRC). Roanoke Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Roanoke Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Roanoke Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Harkin Close: 50km/h (proposed 30km/h)</li> <li>• Crewe Close: 50km/h (proposed 30km/h)</li> <li>• Vinewood Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Roanoke Way has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Roanoke Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Robert Ross Place (Clendon Park)

The speed limit on Robert Ross Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Robert Ross Place connects to Robert Skelton Place to the north and Roscommon Road to the east. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Robert Ross Place is classified as a Secondary Collector road under the one network road classification (ONRC). Robert Ross Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Robert Ross Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1045 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Robert Ross Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Robert Skelton Place: 50km/h (no proposed change)</li> <li>Roscommon Road: 60km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Robert Ross Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.62. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Robert Ross Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Robert Sale Rise (Stonefields)**

The speed limit on Robert Sale Rise, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Robert Sale Rise connects to Barbarich Drive to the west and Searle Street to the east. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Robert Sale Rise is classified as an Access road under the one network road classification (ONRC). Robert Sale Rise is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Robert Sale Rise were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 172 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Robert Sale Rise has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>Searle Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Robert Sale Rise has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Robert Sale Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Robert Skelton Place (Clendon Park)

The speed limit on Robert Skelton Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Robert Skelton Place connects to Robert Ross Place to the south. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Robert Skelton Place is classified as a Secondary Collector road under the one network road classification (ONRC). Robert Skelton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Robert Skelton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1045 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Robert Skelton Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Robert Ross Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Robert Skelton Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.62. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Robert Skelton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Roberts Road (Te Atatu South)**

The speed limit on Roberts Road, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Roberts Road connects to Te Atatu Road to the west. This road provides access to residential properties and is approximately 0.99 km in length.</p> <p>Roberts Road is classified as a primary collector road under the one network road classification (ONRC). Roberts Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4227 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Roberts Road has a mean operating speed in the range of 35-39 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ayrton Road: 50 km/h (proposed 30 km/h)</li> <li>• Cornwall Street: 50 km/h (proposed 30 km/h)</li> <li>• Poto Street: 50 km/h (proposed 30 km/h)</li> <li>• Glynbrooke Street: 50 km/h (proposed 30 km/h)</li> <li>• Te Atatu Road: 50 km/h</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Roberts Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.05 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Roberts Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Roberts Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rodney Street (Otahuhu)

The speed limit on Rodney Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rodney Street connects to Fairburn Road to the south. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Rodney Street is classified as an Access road under the one network road classification (ONRC). Rodney Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rodney Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 330 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rodney Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fairburn Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rodney Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.92. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rodney Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ronaki Road (Otahuhu)

The speed limit on Ronaki Road, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ronaki Road connects to Clement Street to the east and Church Street to the west. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Ronaki Road is classified as an Access road under the one network road classification (ONRC). Ronaki Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ronaki Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ronaki Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Clement Street: 50km/h (proposed 30km/h)</li> <li>• Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>• Petrie Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ronaki Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ronaki Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Roseburn Place (Pakuranga)

The speed limit on Roseburn Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Roseburn Place connects to Ti Rakau Drive to the north. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Roseburn Place is classified as an access road under the one network road classification (ONRC). Roseburn Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Roseburn Place has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ti Rakau Drive: 60 km/h (no proposed changes)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Roseburn Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Roseburn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Rosetta Court (Shelly Park)**

The speed limit on Rosetta Court, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rosetta Court connects to Sunnyview Avenue to the north. This road provides access to residential properties and is approximately 0.04 km in length.</p> <p>Rosetta Court is classified as an access road under the one network road classification (ONRC). Rosetta Court is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rosetta Court has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Sunnyview Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rosetta Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.33 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Rosetta Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Roslyn Terrace (Devonport)

The speed limit on Roslyn Terrace, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Roslyn Terrace connects to Patuone Place to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Roslyn Terrace is classified as an Access road under the one network road classification (ONRC). Roslyn Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Roslyn Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 388 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Roslyn Terrace has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Patuone Place: 50km/h (proposed 30km/h)</li> <li>Calliope Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Roslyn Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Roslyn Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ross Avenue (Otarā)

The speed limit on Ross Avenue, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ross Avenue connects to Everitt Road to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Ross Avenue is classified as an Access road under the one network road classification (ONRC). Ross Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ross Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ross Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Everitt Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ross Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ross Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rota Place (Parnell)

The speed limit on Rota Place, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rota Place connects to Bridgewater Road to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Rota Place is classified as an Access road under the one network road classification (ONRC). Rota Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rota Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rota Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bridgewater Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rota Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rota Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Roys Road (Weymouth)

The speed limit on Roys Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Roys Road connects to Beihlers Road to the east and Ocean View Road to the north. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Roys Road is classified as an Access road under the one network road classification (ONRC). Roys Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Roys Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Roys Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Beihlers Road: 50km/h (proposed 30km/h)</li> <li>• Ocean View Road: 50km/h (proposed 30km/h)</li> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Roys Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Roys Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Royton Avenue (Mangere East)

The speed limit on Royton Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Royton Avenue connects to Yates Road to the north and Buckland Road to the south. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Royton Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Royton Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: two minor crashes, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Royton Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2553 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Royton Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Yates Road: 50km/h (proposed 30km/h)</li> <li>Buckland Road: 50km/h (no proposed change)</li> <li>Chalfont Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Royton Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Royton Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rukumoana Place (Clendon Park)

The speed limit on Rukumoana Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rukumoana Place connects to Burundi Avenue to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Rukumoana Place is classified as an Access road under the one network road classification (ONRC). Rukumoana Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rukumoana Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rukumoana Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Burundi Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rukumoana Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rukumoana Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Runa Place (Mt Wellington)

The speed limit on Runa Place, Mt Wellington has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Runa Place connects to Panama Road to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Runa Place is classified as an Access road under the one network road classification (ONRC). Runa Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Runa Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Runa Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Panama Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Runa Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Runa Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rural View Terrace (Pukekohe)

The speed limit on Rural View Terrace, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rural View Terrace connects to Adams Road South to the west. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Rural View Terrace is classified as an Access road under the one network road classification (ONRC). Rural View Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rural View Terrace were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rural View Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Adams Road South: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Rural View Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rural View Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rush Place (Mangere)

The speed limit on Rush Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rush Place connects to Ashgrove Road to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Rush Place is classified as an Access road under the one network road classification (ONRC). Rush Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rush Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rush Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ashgrove Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rush Place has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rush Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Russell Street (Stanley Point)

The speed limit on Russell Street, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Russell Street connects to Waterview Road to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.36km in length.</p> <p>Russell Street is classified as an Access road under the one network road classification (ONRC). Russell Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Russell Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Russell Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waterview Road: 50 km/h (proposed 30 km/h)</li> <li>• Calliope Road: 50 km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Russell Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Russell Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Rutland Road (Stanley Point)

The speed limit on Rutland Road, Stanley Point, between William Bond Street and Cautley Street, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rutland Road connects to Kiwi Road to the east and William Bond Street to the west. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Rutland Road is classified as a Secondary Collector road under the one network road classification (ONRC). Rutland Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rutland Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 277 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Rutland Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kiwi Road: 50 km/h (no proposed change)</li> <li>William Bond Street: 50 km/h (proposed 30 km/h)</li> <li>Cautley Street: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Rutland Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rutland Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ryder Place (Pukekohe)

The speed limit on Ryder Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ryder Place connects to Victoria Street West to the south and Park Chester Road to the north. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Ryder Place is classified as an Access road under the one network road classification (ONRC). Ryder Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ryder Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ryder Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Victoria Street West: 50km/h (proposed 30km/h)</li> <li>• Park Chester Road: 50km/h (proposed 30km/h)</li> <li>• Maioha Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Ryder Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ryder Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sabulite Road (Kelston)

The speed limit on Sabulite Road, Kelston, between Butterworth Drive and the northern end of Sabulite Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sabulite Road connects to Rerewai Place to the north and Great North Road to the south. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Sabulite Road is classified as an Arterial road under the one network road classification (ONRC). Sabulite Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: one serious crash, one minor crash, seven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sabulite Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3930 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sabulite Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rerewai Place: 50km/h (proposed 30km/h)</li> <li>Great North Road: 50km/h (no proposed change)</li> <li>Glenview Road: 50km/h (no proposed change)</li> <li>Butterworth Drive: 50km/h (no proposed change)</li> <li>St Leonards Road: 50km/h (no proposed change)</li> <li>St Leonards Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sabulite Road has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Sabulite Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Sabulite Road is an Arterial Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Saint Stephens Avenue (Parnell)

The speed limit on Saint Stephens Avenue, Parnell, between Gladstone Road and the northern end of Saint Stephens Avenue, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Saint Stephens Avenue connects to Judge Street to the north and Parnell Road to the south. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Saint Stephens Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Saint Stephens Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Saint Stephens Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5290 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Saint Stephens Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Judge Street: 50km/h (proposed 30km/h)</li> <li>• Parnell Road: 50km/h (no proposed change)</li> <li>• Brighton Road: 50km/h (no proposed change)</li> <li>• Corunna Avenue: 50km/h (no proposed change)</li> <li>• Burrows Avenue: 50km/h (no proposed change)</li> <li>• Gladstone Road: 50km/h (no proposed change)</li> <li>• Takutai Street: 50km/h (proposed 30km/h)</li> <li>• Lichfield Road: 50km/h (proposed 30km/h)</li> <li>• Canterbury Place: 50km/h (no proposed change)</li> <li>• Awatea Road: 50km/h (proposed 30km/h)</li> <li>• Bridgewater Road: 50km/h (proposed 30km/h)</li> <li>• Crescent Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Saint Stephens Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low-Medium**.

- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Saint Stephens Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Saint Stephens Avenue is a Primary Collector Road, that is not the intended function of this section of Saint Stephens Avenue.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Samara Place (Clendon Park)

The speed limit on Samara Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Samara Place connects to Palmer Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Samara Place is classified as an Access road under the one network road classification (ONRC). Samara Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Samara Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Samara Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Palmer Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Samara Place has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Samara Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sample Road (Albany)

The speed limit on Sample Road, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sample Road connects to Bass Road to the west. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Sample Road is classified as a Access road under the one network road classification (ONRC). Sample Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sample Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sample Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bass Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sample Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sample Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Samuel Cross Place (Greenhithe)

The speed limit on Samuel Cross Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Samuel Cross Place connects to Te Wharau Drive to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Samuel Cross Place is classified as an Access road under the one network road classification (ONRC). Samuel Cross Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Samuel Cross Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Samuel Cross Place has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Te Wharau Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Samuel Cross Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Samuel Cross Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Samuel Place (Stonefields)

The speed limit on Samuel Place, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Samuel Place connects to Guyon Street to the east. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Samuel Place is classified as an Access road under the one network road classification (ONRC). Samuel Place is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Samuel Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Samuel Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Guyon Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Samuel Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Samuel Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sandbrook Avenue (Otago)

The speed limit on Sandbrook Avenue, Otago has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sandbrook Avenue connects to Bairds Road to the north and Oconnor Street to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Sandbrook Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Sandbrook Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sandbrook Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1008 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sandbrook Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> <li>Oconnor Street: 50km/h (proposed 30km/h)</li> <li>Herald Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sandbrook Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.84. For urban areas this corresponds to an IRR band of **High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sandbrook Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sandra Avenue (Otara)

The speed limit on Sandra Avenue, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sandra Avenue connects to Ivon Road to the north. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Sandra Avenue is classified as an Access road under the one network road classification (ONRC). Sandra Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sandra Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sandra Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ivon Road: 50km/h (proposed 30km/h)</li> <li>• Capstick Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sandra Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sandra Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Savage Street (Westmere)

The speed limit on Savage Street, Westmere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Savage Street connects to Old Mill Road to the south. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Savage Street is classified as an access road under the one network road classification (ONRC). Savage Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"

Commented [CS(1)]: Column c

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Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Savage Street has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Old Mill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Savage Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.41 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

## Speed Limit Review – Scanlen Terrace (Kelston)

The speed limit on Scanlen Terrace, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Scanlen Terrace connects to Archibald Road to the east. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Scanlen Terrace is classified as an Access road under the one network road classification (ONRC). Scanlen Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Scanlen Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Savage Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 191 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Scanlen Terrace has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Archibald Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Scanlen Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Scanlen Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – School Road (Belmont)

The speed limit on School Road, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>School Road connects to Lake Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>School Road is classified as an Access road under the one network road classification (ONRC). School Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for School Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of School Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lake Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps School Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for School Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Scoria Crescent (Stonefields)

The speed limit on Scoria Crescent, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Scoria Crescent connects to Stonemason Avenue to the west. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Scoria Crescent is classified as an Access road under the one network road classification (ONRC). Scoria Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Scoria Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Scoria Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Scoria Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Scoria Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Scotts Road (Manurewa East)

The speed limit on Scotts Road, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Scotts Road connects to Alfriston Road to the north and Myers Road to the south. This road provides access to residential properties and is approximately 0.61km in length.</p> <p>Scotts Road is classified as a Secondary Collector road under the one network road classification (ONRC). Scotts Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one serious crash, four minor crashes, one non-injury crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Scotts Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2252 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Scotts Road has a mean operating speed in the range of 45-49km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Alfriston Road: 50km/h (no proposed change)</li> <li>Myers Road: 50km/h (proposed 30km/h)</li> <li>Ellen Street: 50km/h (proposed 30km/h)</li> <li>Mccannalley Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Scotts Road has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Scotts Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sea View Road (Leigh)

The speed limit on Sea View Road, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Sea View Road connects to Seatoun Avenue to the east. This road provides access to residential properties and is approximately 0.24km in length.  Sea View Road is classified as an Access road under the one network road classification (ONRC). Sea View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Sea View Road were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sea View Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Seatoun Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sea View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.76. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sea View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Seacliffe Avenue (Belmont)

The speed limit on Seacliffe Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seacliffe Avenue connects to Winscombe Street to the north and Hamana Street to the south. This road provides access to residential properties and is approximately 0.78km in length.</p> <p>Seacliffe Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Seacliffe Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor crash, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seacliffe Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4390 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Seacliffe Avenue has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Winscombe Street: 50km/h (proposed 30km/h)</li> <li>Hamana Street: 50km/h (proposed 30km/h)</li> <li>Montgomery Avenue: 50km/h (proposed 30km/h)</li> <li>Williamson Avenue: 50km/h (proposed 30km/h)</li> <li>Westwell Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Seacliffe Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Seacliffe Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Seacomb Road (Point Chevalier)

The speed limit on Seacomb Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seacomb Road connects to Walford Road to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Seacomb Road is classified as an Access road under the one network road classification (ONRC). Seacomb Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seacomb Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 300 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Seacombe Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Walford Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Seacombe Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Seacombe Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Seaforth Avenue (Mangere Bridge)

The speed limit on Seaforth Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seaforth Avenue connects to Kiwi Esplanade to the north and Muir Avenue to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Seaforth Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Seaforth Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seaforth Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 343 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Seaforth Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> <li>Nadine Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Seaforth Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Seaforth Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sealand Place (Mangere Bridge)

The speed limit on Sealand Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sealand Place connects to Kiwi Esplanade to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Sealand Place is classified as a Access road under the one network road classification (ONRC). Sealand Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sealand Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sealand Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kiwi Esplanade: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sealand Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sealand Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Searle Street (Stonefields)

The speed limit on Searle Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Searle Street connects to Tephra Boulevard to the south and College Road to the north. This road provides access to residential properties and is approximately 0.70km in length.</p> <p>Searle Street is classified as a Secondary Collector road under the one network road classification (ONRC). Searle Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Searle Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 800 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Searle Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tephra Boulevard: 50km/h (proposed 30km/h)</li> <li>Emilia Nixon Lane: 50km/h (proposed 30km/h)</li> <li>Robert Sale Rise: 50km/h (proposed 30km/h)</li> <li>Burden Lane: 50km/h (proposed 30km/h)</li> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Styak Street: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>Singleton Avenue: 50km/h (proposed 30km/h)</li> <li>Brian Slater Way: 50km/h (proposed 30km/h)</li> <li>Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>College Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Searle Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.

- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Searle Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Seatoun Avenue (Leigh)

The speed limit on Seatoun Avenue, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seatoun Avenue connects to Pakiri Road to the north and Hauraki Road to the south. This road provides access to residential properties and is approximately 0.28km in length.</p> <p>Seatoun Avenue is classified as an Arterial road under the one network road classification (ONRC). Seatoun Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seatoun Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 815 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Seatoun Avenue has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pakiri Road between Seatoun Avenue and 240 metres west of Seatoun Avenue: 50km/h (proposed 30km/h)</li> <li>• Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> <li>• Albert Street: 50km/h (proposed 30km/h)</li> <li>• Sea View Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Seatoun Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.03. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Seatoun Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Seatoun Avenue is an Arterial Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Settlers Cove (Weymouth)

The speed limit on Settlers Cove, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Settlers Cove connects to Weymouth Road to the east and Footwide Place to the west. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Settlers Cove is classified as an Access road under the one network road classification (ONRC). Settlers Cove is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Settlers Cove were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Settlers Cove has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Footwide Place: 50km/h (proposed 30km/h)</li> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>Newbegin Place: 50km/h (proposed 30km/h)</li> <li>Barr Place: 50km/h (proposed 30km/h)</li> <li>Matilda Place: 50km/h (proposed 30km/h)</li> <li>Woodlark Close: 50km/h (proposed 30km/h)</li> <li>Tonson Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Settlers Cove has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Settlers Cove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Settlers Way (Pukekohe)

The speed limit on Settlers Way, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Settlers Way connects to Princes Street West to the south. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Settlers Way is classified as an Access road under the one network road classification (ONRC). Settlers Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Settlers Way were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Settlers Way has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Princes Street West: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Settlers Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Settlers Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sexton Place (Manurewa East)

The speed limit on Sexton Place, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sexton Place connects to Greenmeadows Avenue to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Sexton Place is classified as an Access road under the one network road classification (ONRC). Sexton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sexton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 748 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sexton Place has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Greenmeadows Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sexton Place has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sexton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Seymour Road (Mellons Bay)

The speed limit on Seymour Road, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seymour Road connects to Mellons Bay Road to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Seymour Road is classified as an Access road under the one network road classification (ONRC). Seymour Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seymour Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Seymour Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mellons Bay Road: 50km/h (proposed 30km/h)</li> <li>• Oceania Place: 50km/h (proposed 30km/h)</li> <li>• Pleasant Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Seymour Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Seymour Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.



## Speed Limit Review – Shannon Grove (Pukekohe)

The speed limit on Shannon Grove, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Shannon Grove connects to Puriri Road to the east. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Shannon Grove is classified as an Access road under the one network road classification (ONRC). Shannon Grove is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Shannon Grove were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Shannon Grove has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Puriri Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Shannon Grove has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Shannon Grove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Shelby Lane (Flat Bush)

The speed limit on Shelby Lane, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Shelby Lane connects to Baverstock Road to the south. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Shelby Lane is classified as an Access road under the one network road classification (ONRC). Shelby Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Shelby Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Shelby Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Shelby Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Shelby Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sherbourne Road (Mount Eden)

The speed limit on Sherbourne Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sherbourne Road connects to View Road to the north and Valley Road to the south. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Sherbourne Road is classified as a Primary collector road under the one network road classification (ONRC). Sherbourne Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sherbourne Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sherbourne Road has a mean operating speed in the range of 35-39km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• View Road: 50km/h (proposed 30km/h)</li> <li>• Sydenham Road: 50km/h (proposed 30km/h)</li> <li>• Bellevue Road: 50km/h (proposed 30km/h)</li> <li>• Valley Road: 50km/h (proposed 30km/h)</li> <li>• Charlton Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sherbourne Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Sherbourne Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Shoal Bay Road (Devonport)

The speed limit on Shoal Bay Road, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Shoal Bay Road connects to Patuone Place to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Shoal Bay Road is classified as a Secondary Collector road under the one network road classification (ONRC). Shoal Bay Road is a two-way, Divided - traversable road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Shoal Bay Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Divided - traversable</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Shoal Bay Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Patuone Place: 50km/h (proposed 30km/h)</li> <li>• Calliope Road: 50km/h (no proposed change)</li> <li>• Clarence Street: 50km/h (no proposed change)</li> <li>• St Leonards Road: 50km/h (proposed 30km/h)</li> <li>• Hastings Parade: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Shoal Bay Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.09. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Shoal Bay Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Short Street (Manurewa East)

The speed limit on Short Street, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Short Street connects to Ellen Street to the south. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Short Street is classified as an Access road under the one network road classification (ONRC). Short Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Short Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Short Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ellen Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Short Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Short Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Silver Creek Road (Weymouth)

The speed limit on Silver Creek Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Silver Creek Road connects to Myna Place to the west and Ethernon Drive to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Silver Creek Road is classified as an Access road under the one network road classification (ONRC). Silver Creek Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Silver Creek Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 330 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Silver Creek Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Myna Place: 50km/h (proposed 30km/h)</li> <li>• Etherton Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Silver Creek Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Silver Creek Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Silverwood Drive (Flat Bush)

The speed limit on Silverwood Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Silverwood Drive connects to Baverstock Road to the east and Woodberry Drive to the west. This road provides access to residential properties and is approximately 0.22km in length.</p> <p>Silverwood Drive is classified as an Access road under the one network road classification (ONRC). Silverwood Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Silverwood Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Silverwood Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Baverstock Road: 50km/h (proposed 30km/h)</li> <li>Woodberry Drive: 50km/h (proposed 30km/h)</li> <li>Greenbrooke Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Silverwood Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Silverwood Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Singleton Avenue (Stonefields)

The speed limit on Singleton Avenue, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Singleton Avenue connects to Barbarich Drive to the west and Garin Way to the east. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Singleton Avenue is classified as an Access road under the one network road classification (ONRC). Singleton Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Singleton Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Singleton Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>• Garin Way: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Singleton Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Singleton Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Smale Street (Point Chevalier)

The speed limit on Smale Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Smale Street connects to Hawea Road to the west and Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.61km in length.</p> <p>Smale Street is classified as a Secondary Collector road under the one network road classification (ONRC). Smale Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Smale Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Smale Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hawea Street: 50 km/h (proposed 30 km/h)</li> <li>Rama Street: 50 km/h (proposed 30 km/h)</li> <li>Pelham Avenue: 50 km/h (proposed 30 km/h)</li> <li>Berridge Avenue: 50 km/h (proposed 30 km/h)</li> <li>Studholme Street: 50 km/h (proposed 30 km/h)</li> <li>Point Chevalier Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Smale Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Smale Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Snell Place (Pakuranga)

The speed limit on Snell Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Snell Place connects to Edgewater Drive to the east. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Snell Place is classified as a Access road under the one network road classification (ONRC). Snell Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Snell Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Snell Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Edgewater Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Snell Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Snell Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sohlue Place (Oteha)

The speed limit on Sohlue Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sohlue Place connects to Fernhill Way to the east. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Sohlue Place is classified as a Secondary Collector road under the one network road classification (ONRC). Sohlue Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sohlue Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sohlue Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sohlue Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sohlue Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Songline Road (Karaka)

The speed limit on Songline Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Songline Road connects to Hayfield Way to the east and Ockhams Street to the west. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Songline Road is classified as an Access road under the one network road classification (ONRC). Songline Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Songline Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Songline Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hayfield Way: 50km/h (proposed 30km/h)</li> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> <li>Gingernut Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Songline Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Songline Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sonoma Crescent (Oteha)

The speed limit on Sonoma Crescent, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sonoma Crescent connects to Fernhill Way to the south. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Sonoma Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Sonoma Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sonoma Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sonoma Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Fernhill Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sonoma Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sonoma Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sparrow Place (Weymouth)

The speed limit on Sparrow Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sparrow Place connects to Etherton Drive to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Sparrow Place is classified as an Access road under the one network road classification (ONRC). Sparrow Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sparrow Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 90 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sparrow Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sparrow Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sparrow Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Splendour Close (Henderson)

The speed limit on Splendour Close, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Splendour Close connects to Rathgar Road to the south. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Splendour Close is classified as an Access road under the one network road classification (ONRC). Splendour Close is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Splendour Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 349 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Splendour Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Splendour Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Splendour Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Spring Valley Place (Oteha)

The speed limit on Spring Valley Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Spring Valley Place connects to Canyon Drive to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Spring Valley Place is classified as an Access road under the one network road classification (ONRC). Spring Valley Place is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Spring Valley Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 500 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Spring Valley Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Canyon Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Spring Valley Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.99. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Spring Valley Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – St Francis Crescent (Point Chevalier)

The speed limit on St Francis Crescent, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>St Francis Crescent connects to Shaftesbury Avenue to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>St Francis Crescent is classified as an Access road under the one network road classification (ONRC). St Francis Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for St Francis Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1050 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of St Francis Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Shaftesbury Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps St Francis Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for St Francis Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – St Leonards Road (Devonport)

The speed limit on St Leonards Road, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>St Leonards Road connects to High Street to the east and Shoal Bay Road to the west. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>St Leonards Road is classified as an Access road under the one network road classification (ONRC). St Leonards Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for St Leonards Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 560 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of St Leonards Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>High Street: 50 km/h (proposed 30 km/h)</li> <li>Shoal Bay Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps St Leonards Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for St Leonards Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – St Leonards Road (Kelston)

The speed limit on St Leonards Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>St Leonards Road connects to Archibald Road to the east and Sabulite Road between Butterworth Drive and the northern end to the west. This road provides access to residential properties and is approximately 0.72km in length.</p> <p>St Leonards Road is classified as a Primary Collector road under the one network road classification (ONRC). St Leonards Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one serious crash, two minor crashes, four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for St Leonards Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6620 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of St Leonards Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Archibald Road: 50km/h (proposed 30km/h)</li> <li>• Sabulite Road between Butterworth Drive and the northern end: 50km/h (proposed 30km/h)</li> <li>• Barbary Avenue: 50km/h (proposed 30km/h)</li> <li>• Bamboo Grove: 50km/h (proposed 30km/h)</li> <li>• Vanguard Road: 50km/h (proposed 30km/h)</li> <li>• Tamatimu Lane: 50km/h (proposed 30km/h)</li> <li>• Archlynn Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps St Leonards Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for St Leonards Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – St Michaels Avenue (Point Chevalier)

The speed limit on St Michaels Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>St Michaels Avenue connects to Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.51km in length.</p> <p>St Michaels Avenue is classified as an Access road under the one network road classification (ONRC). St Michaels Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for St Michaels Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of St Michaels Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps St Michaels Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.58. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for St Michaels Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stainton Place (Otaru)

The speed limit on Stainton Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stainton Place connects to Blampied Road to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Stainton Place is classified as an Access road under the one network road classification (ONRC). Stainton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stainton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 655 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Stainton Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Blampied Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Stainton Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stainton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Standage Lane (Kelston)

The speed limit on Standage Lane, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Standage Lane connects to Kelman Road to the south. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Standage Lane is classified as a Access road under the one network road classification (ONRC). Standage Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Standage Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 268 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Standage Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kelman Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Standage Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Standage Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stanway Place (Ellerslie)

The speed limit on Stanway Place, Ellerslie has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stanway Place connects to Kalmia Street to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Stanway Place is classified as an access road under the one network road classification (ONRC). Stanway Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stanway Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and Very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Urban Residential as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Stanway Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kalmia Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Stanway Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.83. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stanway Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Staverton Crescent (Mangere)

The speed limit on Staverton Crescent, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Staverton Crescent connects to Killington Crescent to the north and Lawford Place to the south. This road provides access to residential properties and is approximately 0.58km in length.</p> <p>Staverton Crescent is classified as an Access road under the one network road classification (ONRC). Staverton Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Staverton Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Staverton Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Killington Crescent: 50km/h (proposed 30km/h)</li> <li>• Lawford Place: 50km/h (proposed 30km/h)</li> <li>• Norton Place: 50km/h (proposed 30km/h)</li> <li>• Orly Avenue: 50km/h (proposed 30km/h)</li> <li>• Desford Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Staverton Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Staverton Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Steamer Place (Greenhithe)

The speed limit on Steamer Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Steamer Place connects to Admirals Court Drive to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Steamer Place is classified as an Access road under the one network road classification (ONRC). Steamer Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Steamer Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 297 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Steamer Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Admirals Court Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Steamer Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Steamer Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stephen Avenue (Henderson)

The speed limit on Stephen Avenue, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stephen Avenue connects to Pomaria Road to the north and Fairdene Avenue to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Stephen Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Stephen Avenue is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stephen Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 461 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Stephen Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pomaria Road: 50km/h (proposed 30km/h)</li> <li>• Fairdene Avenue: 50km/h (proposed 30km/h)</li> <li>• Kona Crescent: 50km/h (proposed 30km/h)</li> <li>• Nephrite Lane: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Stephen Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stephen Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stephen Lysnar Place (Hillsborough)

The speed limit on Stephen Lysnar Place, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stephen Lysnar Place connects to Hendry Avenue to the north. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Stephen Lysnar Place is classified as an Access road under the one network road classification (ONRC). Stephen Lysnar Place is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Stephen Lysnar Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hendry Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Stephen Lysnar Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stephen Lysnar Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sterling Avenue (Manurewa East)

The speed limit on Sterling Avenue, Manurewa East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sterling Avenue connects to Myers Road to the north and Greenmeadows Avenue to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Sterling Avenue is classified as an Access road under the one network road classification (ONRC). Sterling Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sterling Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 748 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sterling Avenue has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Myers Road: 50km/h (proposed 30km/h)</li> <li>• Greenmeadows Avenue: 50km/h (proposed 30km/h)</li> <li>• Jenkins Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sterling Avenue has the following information:

- o Collective Risk band of **Low Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 1.66. For urban areas this corresponds to an IRR band of **Low Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sterling Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stoll Place (Clendon Park)

The speed limit on Stoll Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stoll Place connects to Finlayson Avenue to the north. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Stoll Place is classified as an Access road under the one network road classification (ONRC). Stoll Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stoll Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 230 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Stoll Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Stoll Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stoll Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stonebrook Lane (Flat Bush)

The speed limit on Stonebrook Lane, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stonebrook Lane connects to Oakville Avenue to the west and Amon Avenue to the east. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Stonebrook Lane is classified as an Access road under the one network road classification (ONRC). Stonebrook Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stonebrook Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Stonebrook Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Oakville Avenue: 50km/h (proposed 30km/h)</li> <li>• Amon Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Stonebrook Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stonebrook Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stonefields Avenue (Stonefields)

The speed limit on Stonefields Avenue, Stonefields between College Road and Tephra Boulevard has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stonefields Avenue connects to Tephra Boulevard to the south and College Road to the north. This road provides access to residential properties and is approximately 0.65km in length.</p> <p>Stonefields Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Stonefields Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stonefields Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 971 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Stonefields Avenue has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>College Road: 50km/h (no proposed change)</li> <li>Tephra Boulevard: 50km/h (proposed 30km/h)</li> <li>Kauriki Terrace: 50km/h (proposed 30km/h)</li> <li>Aruhe Street: 50km/h (proposed 30km/h)</li> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Stonefields Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stonefields Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Stonemason Avenue (Stonefields)**

The speed limit on Stonemason Avenue, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stonemason Avenue connects to Searle Street to the west and Tihī Street to the east. This road provides access to residential properties and is approximately 0.76km in length.</p> <p>Stonemason Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Stonemason Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stonemason Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 971 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Stonemason Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Searle Street: 50km/h (proposed 30km/h)</li> <li>• Briody Terrace: 50km/h (proposed 30km/h)</li> <li>• Garin Way: 50km/h (proposed 30km/h)</li> <li>• Wynne Gray Avenue: 50km/h (proposed 30km/h)</li> <li>• Bluegrey Avenue: 50km/h (proposed 30km/h)</li> <li>• Brian Slater Way: 50km/h (proposed 30km/h)</li> <li>• Guyon Street: 50km/h (proposed 30km/h)</li> <li>• Scoria Crescent: 50km/h (proposed 30km/h)</li> <li>• Stonefields Avenue: 50km/h (proposed 30km/h)</li> <li>• Vialou Lane: 50km/h (proposed 30km/h)</li> <li>• Fynes Avenue: 50km/h (proposed 30km/h)</li> <li>• Papango Street: 50km/h (proposed 30km/h)</li> <li>• Purchas Hill Drive: 50km/h (proposed 30km/h)</li> <li>• Ganley Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Stonemason Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stonemason Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stornaway Drive (Flat Bush)

The speed limit on Stornaway Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stornaway Drive connects to Cyril French Drive to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Stornaway Drive is classified as an Access road under the one network road classification (ONRC). Stornaway Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stornaway Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Stornaway Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cyril French Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Stornaway Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stornaway Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Studholme Street (Point Chevalier)

The speed limit on Studholme Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Studholme Street connects to Smale Street to the north and Miller Street to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Studholme Street is classified as an Access road under the one network road classification (ONRC). Studholme Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Studholme Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 78 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Studholme Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Smale Street: 50 km/h (proposed 30 km/h)</li> <li>• Miller Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Studholme Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.18. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Studholme Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sturges Avenue (Otahuhu)

The speed limit on Sturges Avenue, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sturges Avenue connects to Nixon Avenue to the north and Nelson Street to the south. This road provides access to residential properties and is approximately 0.46km in length.</p> <p>Sturges Avenue is classified as an Access road under the one network road classification (ONRC). Sturges Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sturges Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sturges Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nixon Avenue: 50km/h (proposed 30km/h)</li> <li>Nelson Street: 50km/h (proposed 30km/h)</li> <li>Ngaio Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sturges Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sturges Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Styak Street (Stonefields)**

The speed limit on Styak Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Styak Street connects to Barbarich Drive to the west and Wynne Gray Avenue to the east. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Styak Street is classified as a Secondary Collector road under the one network road classification (ONRC). Styak Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Styak Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1352 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Styak Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>• Searle Street: 50km/h (proposed 30km/h)</li> <li>• Wynne Gray Avenue: 50km/h (proposed 30km/h)</li> <li>• Briody Terrace: 50km/h (proposed 30km/h)</li> <li>• Garin Way: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Styak Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Styak Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sullivan Avenue (Mangere Bridge)

The speed limit on Sullivan Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sullivan Avenue connects to Boyd Avenue to the north and Muir Avenue to the south. This road provides access to residential properties and is approximately 0.43km in length.</p> <p>Sullivan Avenue is classified as a Access road under the one network road classification (ONRC). Sullivan Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sullivan Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 296 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sullivan Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Boyd Avenue: 50km/h (proposed 30km/h)</li> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sullivan Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sullivan Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sultan Street (Ellerslie)

The speed limit on Sultan Street, Ellerslie has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sultan Street connects to Kalmia Street to the north. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Sultan Street is classified as an access road under the one network road classification (ONRC). Sultan Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sultan Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box/industrial using MegaMaps tool. The IRR defines Urban Residential as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be"

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sultan Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kalmia Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sultan Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sultan Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Summer Street (Stanley Point)

The speed limit on Summer Street, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Summer Street connects to Waterview Road to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Summer Street is classified as a Secondary Collector road under the one network road classification (ONRC). Summer Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Summer Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 696 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Summer Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waterview Road: 50 km/h (proposed 30 km/h)</li> <li>Calliope Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Summer Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Summer Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Summerfield Lane (Albany)

The speed limit on Summerfield Lane, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Summerfield Lane connects to Albany Highway to the east. This road provides access to residential properties and is approximately 0.15km in length.  Summerfield Lane is classified as an Access road under the one network road classification (ONRC). Summerfield Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Summerfield Lane were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very Narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Summerfield Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Albany Highway: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Summerfield Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Summerfield Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sunnydale Place (Oteha)

The speed limit on Sunnydale Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunnydale Place connects to Fields Parade to the west. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Sunnydale Place is classified as an Access road under the one network road classification (ONRC). Sunnydale Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sunnydale Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sunnydale Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fields Parade: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sunnydale Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sunnydale Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sunnyridge Place (Hillsborough)

The speed limit on Sunnyridge Place, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunnyridge Place connects to Carlton Street to the west. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Sunnyridge Place is classified as a Access road under the one network road classification (ONRC). Sunnyridge Place is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sunnyridge Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Carlton Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sunnyridge Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sunnyridge Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Sunnyview Avenue (Shelly Park)**

The speed limit on Sunnyview Avenue, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunnyview Avenue connects to Sandspit Road to the west and John Gill Road to the east. This road provides access to residential properties and is approximately 0.44 km in length.</p> <p>Sunnyview Avenue is classified as a secondary collector road under the one network road classification (ONRC). Sunnyview Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1126 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sunnyview Avenue has a mean operating speed in the range of 30-34 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• John Gill Road: 50 km/h (proposed 30 km/h)</li> <li>• Rosetta Court: 50 km/h (proposed 30 km/h)</li> <li>• Sandspit Road: 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sunnyview Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.55 For urban areas this corresponds to an IRR band of **Medium High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Sunnyview Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sunrise Lane (Te Atatu South)

The speed limit on Sunrise Lane, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunrise Lane connects to Jaemont Avenue to the south. This road provides access to residential properties and is approximately 0.08 km in length.</p> <p>Sunrise Lane is classified as an access road under the one network road classification (ONRC). Sunrise Lane is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 101 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sunrise Lane has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jaemont Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sunrise Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.69 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Sunrise Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sunshine Terrace (Orewa)

The speed limit on Sunshine Terrace, Orewa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunshine Terrace connects to Panorama Heights to the west. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Sunshine Terrace is classified as a Access road under the one network road classification (ONRC). Sunshine Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sunshine Terrace were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sunshine Terrace has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Panorama Heights: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sunshine Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sunshine Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sunvista Avenue (Oteha)

The speed limit on Sunvista Avenue, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sunvista Avenue connects to Nimstedt Avenue to the south. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Sunvista Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Sunvista Avenue is a two-way, Two lane undivided road. There are partial pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sunvista Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sunvista Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Nimstedt Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sunvista Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sunvista Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Susanne Place (Pakuranga)

The speed limit on Susanne Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Susanne Place connects to Edgewater Drive to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Susanne Place is classified as a Access road under the one network road classification (ONRC). Susanne Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Susanne Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Susanne Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Edgewater Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Susanne Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Susanne Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sutcliffe Place (Otaru)

The speed limit on Sutcliffe Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sutcliffe Place connects to Bairds Road to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Sutcliffe Place is classified as an Access road under the one network road classification (ONRC). Sutcliffe Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sutcliffe Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sutcliffe Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Bairds Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sutcliffe Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sutcliffe Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sutton Avenue (Mangere East)

The speed limit on Sutton Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sutton Avenue connects to Blake Road to the east. This road provides access to residential properties and is approximately 0.88km in length.</p> <p>Sutton Avenue is classified as an Access road under the one network road classification (ONRC). Sutton Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sutton Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1075 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sutton Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blake Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sutton Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sutton Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Swan Crescent (Pakuranga)**

The speed limit on Swan Crescent, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Swan Crescent connects to Tiraumea Drive to the north. This road provides access to residential properties and is approximately 0.27 km in length.</p> <p>Swan Crescent is classified as an access road under the one network road classification (ONRC). Swan Crescent is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Swan Crescent has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Swan Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 1.91 For urban areas this corresponds to an IRR band of **Low Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Swan Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sydenham Road (Mount Eden)

The speed limit on Sydenham Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sydenham Road connects to Sherbourne Road to the east. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Sydenham Road is classified as a Access road under the one network road classification (ONRC). Sydenham Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sydenham Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Sydenham Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sherbourne Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Sydenham Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sydenham Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Sylvan Avenue East (Mount Eden)

The speed limit on Sylvan Avenue East, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sylvan Avenue East connects to Wynyard Road to the east. This road provides access to residential properties and is approximately 0.17km in length.</p> <p>Sylvan Avenue East is classified as a Secondary Collector road under the one network road classification (ONRC). Sylvan Avenue East is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sylvan Avenue East were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sylvan Avenue East has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Sylvan Avenue East has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sylvan Avenue East, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taatahi Street (Weymouth)

The speed limit on Taatahi Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taatahi Street connects to Waimahia Avenue to the south and Waimarino Road to the south. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Taatahi Street is classified as an Access road under the one network road classification (ONRC). Taatahi Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taatahi Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taatahi Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>Waimarino Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taatahi Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taatahi Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taepu Road (Pukekohe)

The speed limit on Taepu Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taepu Road connects to Belmont Road to the north and Victoria Street West to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Taepu Road is classified as an Access road under the one network road classification (ONRC). Taepu Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taepu Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 23 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Taepu Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Belmont Road: 50km/h (proposed 30km/h)</li> <li>• Pollock Road: 60km/h (no proposed change)</li> <li>• Victoria Street West: 50km/h (no proposed change)</li> <li>• Perla Road: 50km/h (proposed 30km/h)</li> <li>• Rainsford Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Taepu Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taepu Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taha Road (Te Atatu South)

The speed limit on Taha Road, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taha Road connects to Tiroroa Avenue to the south. This road provides access to residential properties and is approximately 0.07 km in length.</p> <p>Taha Road is classified as an access road under the one network road classification (ONRC). Taha Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 95 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taha Road has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tiroroa Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taha Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.49 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Taha Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tahatai Street (Otahuhu)

The speed limit on Tahatai Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tahatai Street connects to Waikare Road to the north. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Tahatai Street is classified as an Access road under the one network road classification (ONRC). Tahatai Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tahatai Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tahatai Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waikare Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tahatai Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tahatai Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taiaapure Street (Weymouth)

The speed limit on Taiaapure Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taiaapure Street connects to Ipukarea Street to the north and Tonuitanga Street to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Taiaapure Street is classified as an Access road under the one network road classification (ONRC). Taiaapure Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taiaapure Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taiaapure Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ipukarea Street: 50km/h (proposed 30km/h)</li> <li>Tonuitanga Street: 50km/h (proposed 30km/h)</li> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taiaapure Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taiaapure Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taikaranga Street (Pukekohe)

The speed limit on Taikaranga Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taikaranga Street connects to Te Manaki Street to the west and Jutland Road to the east. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Taikaranga Street is classified as an Access road under the one network road classification (ONRC). Taikaranga Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taikaranga Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Taikaranga Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Te Manaki Street: 50km/h (proposed 30km/h)</li> <li>• Hempopo Street: 50km/h (proposed 30km/h)</li> <li>• Jutland Road: 50km/h (proposed 30km/h)</li> <li>• Matikao Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Taikaranga Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taikaranga Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taitimu Drive (Weymouth)

The speed limit on Taitimu Drive, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taitimu Drive connects to Palmers Road to the north and Kaimoana Street to the east. This road provides access to residential properties and is approximately 0.48km in length.</p> <p>Taitimu Drive is classified as an Access road under the one network road classification (ONRC). Taitimu Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: three minor crashes, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taitimu Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 958 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taitimu Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Palmers Road: 50km/h (proposed 30km/h)</li> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>Weymoth Road: 50km/h (proposed 30km/h)</li> <li>Lane Martha: 50km/h (proposed 30km/h)</li> <li>Blackgate Place: 50km/h (proposed 30km/h)</li> <li>Rebecca Rise: 50km/h (proposed 30km/h)</li> <li>McGreal Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taitimu Drive has the following information:

- Collective Risk band of **Medium-High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taitimu Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Takutai Street (Parnell)

The speed limit on Takutai Street, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Takutai Street connects to Gladstone Road to the east and Lichfield Road to the west. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>Takutai Street is classified as an Access road under the one network road classification (ONRC). Takutai Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Takutai Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 229 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Takutai Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Gladstone Road : 50km/h (no proposed change)</li> <li>• Lichfield Road: 50km/h (proposed 30km/h)</li> <li>• Saint Stephens Avenue: 50km/h (proposed 30km/h)</li> <li>• Glanville Terrace: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Takutai Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Takutai Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tamaki Avenue (Otahuhu)

The speed limit on Tamaki Avenue, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tamaki Avenue connects to Fairburn Road to the north and Cracroft Street to the south. This road provides access to residential properties and is approximately 0.76km in length.</p> <p>Tamaki Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Tamaki Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: one minor crash, three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tamaki Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 614 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tamaki Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Fairburn Road: 50km/h (proposed 30km/h)</li> <li>Cracroft Street: 50km/h (proposed 30km/h)</li> <li>Nelson Street: 50km/h (proposed 30km/h)</li> <li>Ngaio Street: 50km/h (proposed 30km/h)</li> <li>Nixon Avenue: 50km/h (proposed 30km/h)</li> <li>Alexander Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tamaki Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tamaki Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tamariki Avenue (Kelston)

The speed limit on Tamariki Avenue, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tamariki Avenue connects to Aronui Terrace to the north and Nile Road to the south. This road provides access to residential properties and is approximately 0.47km in length.</p> <p>Tamariki Avenue is classified as an Access road under the one network road classification (ONRC). Tamariki Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tamariki Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 743 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tamariki Avenue has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Aronui Terrace: 50km/h (proposed 30km/h)</li> <li>• Nile Road: 50km/h (proposed 30km/h)</li> <li>• Maybelle Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tamariki Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tamariki Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tango Place (Henderson)

The speed limit on Tango Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tango Place connects to Larnoch Road to the north. This road provides access to residential properties and is approximately 0.21km in length.</p> <p>Tango Place is classified as an Access road under the one network road classification (ONRC). Tango Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tango Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tango Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Larnoch Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tango Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tango Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tannock Place (Mangere East)

The speed limit on Tannock Place, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tannock Place connects to Wickman Way to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Tannock Place is classified as an Access road under the one network road classification (ONRC). Tannock Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tannock Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tannock Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Wickman Way: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tannock Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tannock Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tarata Street (Mount Eden)

The speed limit on Tarata Street, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tarata Street connects to Prospect Terrace to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Tarata Street is classified as a Access road under the one network road classification (ONRC). Tarata Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tarata Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tarata Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Valley Road: 50km/h (proposed 30km/h)</li> <li>Prospect Terrace: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tarata Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tarata Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Target Street (Point Chevalier)

The speed limit on Target Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Target Street connects to Muripara Avenue to the west and Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Target Street is classified as a Secondary Collector road under the one network road classification (ONRC). Target Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Target Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1664 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Target Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Neville Street: 50 km/h (proposed 30 km/h)</li> <li>Katoa Street: 50 km/h (proposed 30 km/h)</li> <li>Muripara Avenue: 50 km/h (proposed 30 km/h)</li> <li>Shaftesbury Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Target Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Target Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tate Place (Otara)

The speed limit on Tate Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tate Place connects to Clarkson Crescent to the north. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Tate Place is classified as an Access road under the one network road classification (ONRC). Tate Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tate Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 166 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tate Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Clarkson Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tate Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tate Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taunton Terrace (Blockhouse Bay)

The speed limit on Taunton Terrace, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taunton Terrace connects to Connell Street to the north. This road provides access to residential properties and is approximately 0.67km in length.</p> <p>Taunton Terrace is classified as an Access road under the one network road classification (ONRC). Taunton Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taunton Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taunton Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Connell Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taunton Terrace has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.65. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taunton Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tauoma Crescent (Stonefields)

The speed limit on Tauoma Crescent, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tauoma Crescent connects to Tihi Street to the west. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Tauoma Crescent is classified as an Access road under the one network road classification (ONRC). Tauoma Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tauoma Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 450 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tauoma Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tihi Street: 50km/h (proposed 30km/h)</li> <li>• Papango Street: 50km/h (proposed 30km/h)</li> <li>• Reipae Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tauoma Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.69. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tauoma Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taurarua Terrace (Parnell)

The speed limit on Taurarua Terrace, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taurarua Terrace connects to Judges Bay Road to the north and Canterbury Place to the south. This road provides access to residential properties and is approximately 0.25km in length.</p> <p>Taurarua Terrace is classified as an Access road under the one network road classification (ONRC). Taurarua Terrace is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taurarua Terrace were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Taurarua Terrace has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Judges Bay Road: 50km/h (proposed 30km/h)</li> <li>Canterbury Place: 50km/h (proposed 30km/h)</li> <li>Avon Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Taurarua Terrace has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Taurarua Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tawhiti Road (Pukekohe)

The speed limit on Tawhiti Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tawhiti Road connects to Adams Road south to the west and Jutland Road to the east. This road provides access to residential properties and is approximately 0.58km in length.</p> <p>Tawhiti Road is classified as a Access road under the one network road classification (ONRC). Tawhiti Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tawhiti Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tawhiti Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Adams Road South: 100km/h (proposed 30km/h)</li> <li>• Koropupu Street: 50km/h (proposed 30km/h)</li> <li>• Raki Street: 50km/h (proposed 30km/h)</li> <li>• Kapia Street: 50km/h (proposed 30km/h)</li> <li>• Te Manaki Street: 50km/h (proposed 30km/h)</li> <li>• Jutland Road: 50km/h (proposed 30km/h)</li> <li>• Tomairangi Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tawhiti Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tawhiti Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Ipukai Drive (Karaka)

The speed limit on Te Ipukai Drive, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Ipukai Drive connects to Patakatuna Drive to the north and Kauru Way to the west. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Te Ipukai Drive is classified as an Access road under the one network road classification (ONRC). Te Ipukai Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Ipukai Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Te Ipukai Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Patakatuna Drive: 50km/h (proposed 30km/h)</li> <li>Kauru Way: 50km/h (proposed 30km/h)</li> <li>Mataitai Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Te Ipukai Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Ipukai Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Kanawa Crescent (Henderson)

The speed limit on Te Kanawa Crescent, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Kanawa Crescent connects to Lincoln Road to the east. This road provides access to residential properties and is approximately 0.55km in length.</p> <p>Te Kanawa Crescent is classified as a Secondary Collector road under the one network road classification (ONRC). Te Kanawa Crescent is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Kanawa Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 799 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Kanawa Crescent has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Lincoln Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Te Kanawa Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Kanawa Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Manaki Street (Pukekohe)

The speed limit on Te Manaki Street, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Manaki Street connects to Huamanu Street to the north and Belmont Road to the south. This road provides access to residential properties and is approximately 0.39km in length.</p> <p>Te Manaki Street is classified as an Access road under the one network road classification (ONRC). Te Manaki Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Manaki Street were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Te Manaki Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Huamanu Street: 50 km/h (proposed 30 km/h)</li> <li>Marire Place: 50 km/h (proposed 30 km/h)</li> <li>Tawhiti Road: 50 km/h (proposed 30 km/h)</li> <li>Koropupu Street: 50 km/h (proposed 30 km/h)</li> <li>Hempopo Street: 50 km/h (proposed 30 km/h)</li> <li>Taikaranga Street: 50 km/h (proposed 30 km/h)</li> <li>Kare Ariki Place: 50 km/h (proposed 30 km/h)</li> <li>Belmont Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Te Manaki Street has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Manaki Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Ra Road (Point Chevalier)

The speed limit on Te Ra Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Ra Road connects to Walford Road to the east and Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Te Ra Road is classified as a Secondary Collector road under the one network road classification (ONRC). Te Ra Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Ra Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 936 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Ra Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Walford Street: 50 km/h (proposed 30 km/h)</li> <li>• Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Te Ra Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Ra Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Te Wharau Drive (Greenhithe)

The speed limit on Te Wharau Drive, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Wharau Drive connects to Orwell Road to the east. This road provides access to residential properties and is approximately 1.17km in length.</p> <p>Te Wharau Drive is classified as an Access road under the one network road classification (ONRC). Te Wharau Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Wharau Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Te Wharau Drive has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Orwell Road: 50km/h (proposed 30km/h)</li> <li>Monkton Close: 50km/h (proposed 30km/h)</li> <li>Samuel Cross Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Te Wharau Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Te Wharau Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Templeton Place (Clendon Park)

The speed limit on Templeton Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Templeton Place connects to Burundi Avenue to the north and Volta Place to the east. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Templeton Place is classified as an Access road under the one network road classification (ONRC). Templeton Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Templeton Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Templeton Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Burundi Avenue: 50km/h (proposed 30km/h)</li> <li>• Volta Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Templeton Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Templeton Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tennessee Avenue (Mangere East)

The speed limit on Tennessee Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tennessee Avenue connects to Blake Road to the north and Massey Road to the east. This road provides access to residential properties and is approximately 0.84km in length.</p> <p>Tennessee Avenue is classified as a Primary Collector road under the one network road classification (ONRC). Tennessee Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records sixteen crashes between 2016 and 2020: one serious crash, four minor crashes, eleven non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tennessee Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4759 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tennessee Avenue has a mean operating speed in the range of 45-49km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blake Road: 50km/h (proposed 30km/h)</li> <li>Massey Road: 50km/h (no proposed change)</li> <li>Vine Street: 50km/h (proposed 30km/h)</li> <li>Fleming Street: 50km/h (proposed 30km/h)</li> <li>Wickman Way: 50km/h (proposed 30km/h)</li> <li>Farmer Street: 50km/h (proposed 30km/h)</li> <li>Driver Road: 50km/h (proposed 30km/h)</li> <li>Cleek Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tennessee Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Tennessee Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Tennessee Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tephra Boulevard (Stonefields)

The speed limit on Tephra Boulevard, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tephra Boulevard connects to Barbarich Drive to the west and Stonefields Avenue to the east. This road provides access to residential properties and is approximately 0.49km in length.</p> <p>Tephra Boulevard is classified as a Secondary Collector road under the one network road classification (ONRC). Tephra Boulevard is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tephra Boulevard were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tephra Boulevard has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>• Stonefields Avenue: 50km/h (proposed 30km/h)</li> <li>• Searle Street: 50km/h (proposed 30km/h)</li> <li>• Wynne Gray Avenue: 50km/h (proposed 30km/h)</li> <li>• Bluegrey Avenue: 50km/h (proposed 30km/h)</li> <li>• Kauriki Terrace: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tephra Boulevard has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tephra Boulevard, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Terry Place (Otara)

The speed limit on Terry Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Terry Place connects to Clayton Avenue to the east. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Terry Place is classified as an Access road under the one network road classification (ONRC). Terry Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Terry Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 93 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Terry Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Clayton Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Terry Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Terry Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Thomas Hamer Place (Greenhithe)

The speed limit on Thomas Hamer Place, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Thomas Hamer Place connects to William Gamble Drive to the north. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Thomas Hamer Place is classified as a Secondary Collector road under the one network road classification (ONRC). Thomas Hamer Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Thomas Hamer Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Thomas Hamer Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• William Gamble Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Thomas Hamer Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Thomas Hamer Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Thomas Road (Mangere)

The speed limit on Thomas Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Thomas Road connects to Orly Avenue to the north and Massey Road to the south. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Thomas Road is classified as a Primary Collector road under the one network road classification (ONRC). Thomas Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twelve crashes between 2016 and 2020: twelve non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Thomas Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4624 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Thomas Road has a mean operating speed in the range of 36.58km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Orly Avenue: 50km/h (proposed 30km/h)</li> <li>Massey Road: 50km/h (no proposed change)</li> <li>Jordan Road: 50km/h (proposed 30km/h)</li> <li>View Road: 50km/h (proposed 30km/h)</li> <li>Cape Road: 50km/h (proposed 30km/h)</li> <li>Cornwall Road: 50km/h (proposed 30km/h)</li> <li>Staverton Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Thomas Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Thomas Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Thomas Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Thyme Court (Flat Bush)

The speed limit on Thyme Court, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Thyme Court connects to Woodberry Drive to the west. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Thyme Court is classified as an Access road under the one network road classification (ONRC). Thyme Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Thyme Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Thyme Court has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Woodberry Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Thyme Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Thyme Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ti Nana Crescent (Henderson)

The speed limit on Ti Nana Crescent, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ti Nana Crescent connects to Rathgar Road to the west and Papatahi Place to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Ti Nana Crescent is classified as an Access road under the one network road classification (ONRC). Ti Nana Crescent is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ti Nana Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 72 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Ti Nana Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> <li>Papatahi Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Ti Nana Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ti Nana Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Tiaka Place (Pakuranga)**

The speed limit on Tiaka Place, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tiaka Place connects to Tiraumea Drive to the north. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Tiaka Place is classified as an access road under the one network road classification (ONRC). Tiaka Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tiaka Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tiaka Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.41 For urban areas this corresponds to an IRR band of **Medium High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tiaka Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tihi Street (Stonefields)

The speed limit on Tihi Street, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tihi Street connects to Barbarich Drive to the west and College Road to the east. This road provides access to residential properties and is approximately 1.24km in length.</p> <p>Tihi Street is classified as a Secondary Collector road under the one network road classification (ONRC). Tihi Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tihi Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 463 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tihi Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Barbarich Drive: 50km/h (proposed 30km/h)</li> <li>College Road: 50km/h (no proposed change)</li> <li>Searle Street: 50km/h (proposed 30km/h)</li> <li>Briody Terrace: 50km/h (proposed 30km/h)</li> <li>Garin Way: 50km/h (proposed 30km/h)</li> <li>Wynne Gray Avenue: 50km/h (proposed 30km/h)</li> <li>Bluegrey Avenue: 50km/h (proposed 30km/h)</li> <li>Samuel Place: 50km/h (proposed 30km/h)</li> <li>Guyon Street: 50km/h (proposed 30km/h)</li> <li>Vialou Lane: 50km/h (proposed 30km/h)</li> <li>Stonefields Avenue: 50km/h (proposed 30km/h)</li> <li>Flax Place: 50km/h (proposed 30km/h)</li> <li>Fynes Avenue: 50km/h (proposed 30km/h)</li> <li>Korere Terrace: 50km/h (proposed 30km/h)</li> <li>Papango Street: 50km/h (proposed 30km/h)</li> <li>Tauomo Crescent: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>Reipae Street: 50km/h (proposed 30km/h)</li> </ul>

	<ul style="list-style-type: none"> <li>Purchas Hill Drive: 50km/h (proposed 30km/h)</li> </ul>
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**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tihi Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tihi Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Timandra Place (Massey)

The speed limit on Timandra Place, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Timandra Place connects to Lilburn Crescent to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Timandra Place is classified as an Access road under the one network road classification (ONRC). Timandra Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Timandra Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 214 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Timandra Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Lilburn Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Timandra Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Timandra Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tindall Crescent (Otara)

The speed limit on Tindall Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tindall Crescent connects to Bond Street to the north and Cobham Crescent to the west. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Tindall Crescent is classified as an Access road under the one network road classification (ONRC). Tindall Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tindall Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 769 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tindall Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bond Street: 50km/h (proposed 30km/h)</li> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tindall Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tindall Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tirau Place (Mangere)

The speed limit on Tirau Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tirau Place connects to Thomas Road. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Tirau Place is classified as an Access road under the one network road classification (ONRC). Tirau Place is a two-way, Two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tirau Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tirau Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Thomas Road: 50km/h (proposed 30km/h)</li> <li>• Cape Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tirau Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.45. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tirau Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tiraumea Drive (Pakuranga)

The speed limit on Tiraumea Drive, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tiraumea Drive connects to Ti Rakau Drive to the north. This road provides access to residential properties and is approximately 1.28 km in length.</p> <p>Tiraumea Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Tiraumea Drive is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records nine crashes between 2016 and 2020: 2 minor and 7 non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1976 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tiraumea Drive has a mean operating speed in the range of 35-39 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ti Rakau Drive: 60 km/h</li> <li>Dolphin Street: 50 km/h (proposed 30 km/h)</li> <li>Bolina Crescent: 50 km/h (proposed 30 km/h)</li> <li>Jan Place: 50 km/h (proposed 30 km/h)</li> <li>Undine Street: 50 km/h (proposed 30 km/h)</li> <li>Osprey Street: 50 km/h (proposed 30 km/h)</li> <li>Tiaka Place 50 km/h (proposed 30 km/h)</li> <li>Pandora Place: 50 km/h (proposed 30 km/h)</li> <li>Swan Crescent: 50 km/h (proposed 30 km/h)</li> <li>Bolina Crescent: 50 km/h (proposed 30 km/h)</li> <li>Pelorus Place: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tiraumea Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**

- The Infrastructure Risk Rating Score is 2.43 For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tiraumea Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Tiroroa Avenue (Te Atatu South)**

The speed limit on Tiroroa Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tiroroa Avenue connects to Te Atatu Road to the west. This road provides access to residential properties and is approximately 1.48 km in length.</p> <p>Tiroroa Avenue is classified as a primary collector road under the one network road classification (ONRC). Tiroroa Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1843 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tiroroa Avenue has a mean operating speed in the range of 30-34 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Lyndhurst Road: 50 km/h (proposed 30 km/h)</li> <li>• Wakeling Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Wairata Place: 50 km/h (proposed 30 km/h)</li> <li>• Taha Road: 50 km/h (proposed 30 km/h)</li> <li>• Te Atatu Road: 50 km/h</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tiroroa Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.31 For urban areas this corresponds to an IRR band of **Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tiroroa Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Tiroroa Avenue is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Titoki Avenue (Mangere Bridge)

The speed limit on Titoki Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Titoki Avenue connects to Wallace Road to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Titoki Avenue is classified as a Access road under the one network road classification (ONRC). Titoki Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Titoki Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Titoki Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wallace Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Titoki Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Titoki Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Todd Place (Otahuhu)

The speed limit on Todd Place, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Todd Place connects to Avenue Road to the south. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Todd Place is classified as an Access road under the one network road classification (ONRC). Todd Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Todd Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 270 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Todd Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Avenue Road between Atkinson Avenue and the eastern end of Atkinson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Todd Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Todd Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tomairangi Crescent (Pukekohe)

The speed limit on Tomairangi Crescent, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Tomairangi Crescent connects to Tawhiti Road to the south. This road provides access to residential properties and is approximately 0.28km in length.  Tomairangi Crescent is classified as an Access road under the one network road classification (ONRC). Tomairangi Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Tomairangi Crescent were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tomairangi Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tawhiti Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tomairangi Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tomairangi Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tonson Place (Weymouth)

The speed limit on Tonson Place, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tonson Place connects to Settlers Cove to the south. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Tonson Place is classified as an Access road under the one network road classification (ONRC). Tonson Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tonson Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tonson Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tonson Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tonson Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tonuitanga Street (Weymouth)

The speed limit on Tonuitanga Street, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tonuitanga Street connects to Taiaapure Street to the north and Kaimoana Street to the east. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Tonuitanga Street is classified as an Access road under the one network road classification (ONRC). Tonuitanga Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tonuitanga Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tonuitanga Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Taiaapure Street: 50km/h (proposed 30km/h)</li> <li>• Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>• Kuparu Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tonuitanga Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tonuitanga Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Toporoa Street (Karaka)

The speed limit on Toporoa Street, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Toporoa Street connects to Hayfield Way to the east and Ockhams Street to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Toporoa Street is classified as an Access road under the one network road classification (ONRC). Toporoa Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Toporoa Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Toporoa Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hayfield Way: 50km/h (proposed 30km/h)</li> <li>Ockhams Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Toporoa Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Toporoa Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tornish Drive (Flat Bush)

The speed limit on Tornish Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tornish Drive connects to Bronwylian Drive to the north and Cyril French Drive to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Tornish Drive is classified as an Access road under the one network road classification (ONRC). Tornish Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tornish Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tornish Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Bronwylian Drive: 50km/h (proposed 30km/h)</li> <li>• Cyril French Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tornish Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tornish Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Totara Road (Leigh)

The speed limit on Totara Road, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Totara Road connects to Hill Street to the east and Hauraki Road to the west. This road provides access to residential properties and is approximately 0.44km in length.</p> <p>Totara Road is classified as an Access road under the one network road classification (ONRC). Totara Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Totara Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as "rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 332 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Totara Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hill Street: 50km/h (proposed 30km/h)</li> <li>Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> <li>Cotterell Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Totara Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Totara Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Towbridge Place (Mellons Bay)**

The speed limit on Towbridge Place, Mellons Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Towbridge Place connects to Castleton Drive to the north. This road provides access to residential properties and is approximately 0.15km in length.</p> <p>Towbridge Place is classified as an Access road under the one network road classification (ONRC). Towbridge Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Towbridge Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1032 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Towbridge Place has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Castleton Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Towbridge Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low-Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Towbridge Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tranent Road (Mangere)

The speed limit on Tranent Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tranent Road connects to Imrie Avenue to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Tranent Road is classified as an Access road under the one network road classification (ONRC). Tranent Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tranent Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tranent Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Imrie Avenue: 50km/h (proposed 30km/h)</li> <li>Deborah Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tranent Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tranent Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Trelawn Place (Cockle Bay)**

The speed limit on Trelawn Place, Cockle Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trelawn Place connects to Sandspit Road to the west. This road provides access to residential properties and is approximately 0.36 km in length.</p> <p>Trelawn Place is classified as an access road under the one network road classification (ONRC). Trelawn Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1580 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Trelawn Place has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Sandspit Road: 50 km/h</li> <li>Alexander Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Trelawn Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.33 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Trelawn Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Trembath Avenue (Mangere East)

The speed limit on Trembath Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trebath Avenue connects to Farmer Street to the west. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Trebath Avenue is classified as an Access road under the one network road classification (ONRC). Trebath Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Trembath Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Trembath Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Farmer Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Trembath Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Trembath Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Trenwith Street (Otahuhu)

The speed limit on Trenwith Street, Otahuhu, between Water Street and 70m east of Water Street, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trenwith Street connects to Frank Grey Place to the east and Princes Street - Otahuhu Off Ramp to the west. This road provides access to residential properties and is approximately 0.30km in length.</p> <p>Trenwith Street is classified as a Primary Collector road under the one network road classification (ONRC). Trenwith Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Trenwith Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4736 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Trenwith Street has a mean operating speed in the range of 40-44km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Frank Grey Place: 50km/h (no proposed change)</li> <li>• Water Street: 50km/h (proposed 30km/h)</li> <li>• Princes Street - Otahuhu Off Ramp: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Trenwith Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Trenwith Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Trenwith Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Trident Place (Shelly Park)

The speed limit on Trident Place, Shelly Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trident Place connects to John Gill Road to the west. This road provides access to residential properties and is approximately 0.09 km in length.</p> <p>Trident Place is classified as an access road under the one network road classification (ONRC). Trident Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Trident Place has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>John Gill Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Trident Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.49 For urban areas this corresponds to an IRR band of **Medium High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Trident Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tsar Court (Flat Bush)

The speed limit on Tsar Court, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tsar Court connects to Coachman Drive to the north. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Tsar Court is classified as an Access road under the one network road classification (ONRC). Tsar Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tsar Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tsar Court has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Coachman Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tsar Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tsar Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tuarongo Road (Karaka)

The speed limit on Tuarongo Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tuarongo Road connects to Karera Road to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Tuarongo Road is classified as an Access road under the one network road classification (ONRC). Tuarongo Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tuarongo Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tuarongo Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Karera Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tuarongo Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tuarongo Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tumu Road (Karaka)

The speed limit on Tumu Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tumu Road connects to Hayfield Way to the east and Ockhams Street to the west. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Tumu Road is classified as an Access road under the one network road classification (ONRC). Tumu Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tumu Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tumu Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hayfield Way: 50km/h (proposed 30km/h)</li> <li>• Ockhams Street: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tumu Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tumu Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tutuwhatu Crescent (Weymouth)

The speed limit on Tutuwhatu Crescent, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tutuwhatu Crescent connects to Kaimoana Street to the south. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Tutuwhatu Crescent is classified as an Access road under the one network road classification (ONRC). Tutuwhatu Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tutuwhatu Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tutuwhatu Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tutuwhatu Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tutuwhatu Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tuuhura Road (Pukekohe)

The speed limit on Tuuhura Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tuuhura Road connects to Rainsford Road to the west. This road provides access to residential properties and is approximately 0.18km in length.</p> <p>Tuuhura Road is classified as an Access road under the one network road classification (ONRC). Tuuhura Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tuuhura Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tuuhura Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Rainsford Road: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tuuhura Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tuuhura Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tynor Place (Hillsborough)

The speed limit on Tynor Place, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tynor Place connects to Pallister Drive to the west. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Tynor Place is classified as an Access road under the one network road classification (ONRC). Tynor Place is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Tynor Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Pallister Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Tynor Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tynor Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tyrone Street (Otara)

The speed limit on Tyrone Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tyrone Street connects to Johnstones Road to the south. This road provides access to residential properties and is approximately 0.63km in length.</p> <p>Tyrone Street is classified as an Access road under the one network road classification (ONRC). Tyrone Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one serious and one non-injury crash. This resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tyrone Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 322 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tyrone Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Perth Street: 50km/h (proposed 30km/h)</li> <li>• Antrim Crescent: 50km/h (proposed 30km/h)</li> <li>• Nairn Place: 50km/h (proposed 30km/h)</li> <li>• Angus Street: 50km/h (proposed 30km/h)</li> <li>• Johnstones Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Tyrone Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tyrone Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Umuti Lane (Karaka)

The speed limit on Umuti Lane, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Umuti Lane connects to Mataitai Way to the east and Kauru Way to the west. This road provides access to residential properties and is approximately 0.07km in length.</p> <p>Umuti Lane is classified as an Access road under the one network road classification (ONRC). Umuti Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Umuti Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Umuti Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mataitai Way: 50km/h (proposed 30km/h)</li> <li>Kauru Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Umuti Lane has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Umuti Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Undine Street (Pakuranga)**

The speed limit on Undine Street, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Undine Street connects to Tiraumea Drive to the south. This road provides access to residential properties and is approximately 0.12 km in length.</p> <p>Undine Street is classified as an access road under the one network road classification (ONRC). Undine Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Undine Street has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Tiraumea Drive: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Undine Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Undine Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Upwood Place (Mangere)

The speed limit on Upwood Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Upwood Place connects to Killington Crescent to the north. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Upwood Place is classified as an Access road under the one network road classification (ONRC). Upwood Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Upwood Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 811 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Upwood Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Killington Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Upwood Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.41. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Upwood Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Urban Grove (Ranui)

The speed limit on Urban Grove, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Urban Grove connects to Ulrich Drive to the east. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Urban Grove is classified as an Access road under the one network road classification (ONRC). Urban Grove is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Urban Grove were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 370 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Urban Grove has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Urlich Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Urban Grove has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Urban Grove, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Urlich Drive (Ranui)

The speed limit on Urlich Drive, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Urlich Drive connects to Luanda Drive to the east and Mayer Place to the east. This road provides access to residential properties and is approximately 0.83km in length.</p> <p>Urlich Drive is classified as an Access road under the one network road classification (ONRC). Urlich Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one minor crash, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Urlich Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 370 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Urlich Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Luanda Drive between waitemata Drive roundabout and Swanson Road: 50km/h (proposed 30km/h)</li> <li>Mayer Place: 50km/h (proposed 30km/h)</li> <li>Elvira Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Urlich Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ulrich Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Valder Avenue (Otara)

The speed limit on Valder Avenue, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Valder Avenue connects to Pearl Baker Drive to the west and Springs Road to the east. This road provides access to residential properties and is approximately 0.34km in length.  Valder Avenue is classified as an Access road under the one network road classification (ONRC). Valder Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Valder Avenue were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 686 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Valder Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Pearl Baker Drive: 50km/h (proposed 30km/h)</li> <li>• Springs Road: 60km/h (no change proposed)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Valder Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Valder Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Valley Road (Mount Eden)

The speed limit on Valley Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Valley Road connects to Sherbourne Road to the north and Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.65km in length.</p> <p>Valley Road is classified as an Arterial road under the one network road classification (ONRC). Valley Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records thirteen crashes between 2016 and 2020: two serious, five minor and six non-injury crashes. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Valley Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8111 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Valley Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Sherbourne Road: 50km/h (proposed 30km/h)</li> <li>Pentland Avenue: 50km/h (proposed 30km/h)</li> <li>Tarata Street: 50km/h (proposed 30km/h)</li> <li>Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Valley Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Valley Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Valley Road is an Arterial Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vanden Place (Henderson)

The speed limit on Vanden Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vanden Place connects to Larissa Avenue to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Vanden Place is classified as an Access road under the one network road classification (ONRC). Vanden Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vanden Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 158 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Vanden Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Larissa Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vanden Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vanden Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vanguard Road (Kelston)

The speed limit on Vanguard Road, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vanguard Road connects to Nile Road to the north and St Leonards Road to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Vanguard Road is classified as a Secondary Collector road under the one network road classification (ONRC). Vanguard Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vanguard Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vanguard Road has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Nile Road: 50km/h (proposed 30km/h)</li> <li>• St Leonards Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Vanguard Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vanguard Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Velvet Crescent (Otara)

The speed limit on Velvet Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Velvet Crescent connects to Hills Road to the east. This road provides access to residential properties and is approximately 0.5km in length.</p> <p>Velvet Crescent is classified as an Access road under the one network road classification (ONRC). Velvet Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Velvet Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Velvet Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hills Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Velvet Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Velvet Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vespa Road (Karaka)

The speed limit on Vespa Road, Karaka has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vespa Road connects to Hayfield Way to the east and Ockhams Street to the west. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Vespa Road is classified as an Access road under the one network road classification (ONRC). Vespa Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vespa Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vespa Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hayfield Way: 50km/h (proposed 30km/h)</li> <li>• Ockhams Street: 50km/h (proposed 30km/h)</li> <li>• Patakatuna Drive: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Vespa Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.04. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vespa Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vialou Lane (Stonefields)

The speed limit on Vialou Lane, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vialou Lane connects to Tihi Street to the south and Stonemason Avenue to the north. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Vialou Lane is classified as an Access road under the one network road classification (ONRC). Vialou Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vialou Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Vialou Lane has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>Flax Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vialou Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vialou Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vicente Place (Oteha)

The speed limit on Vicente Place, Oteha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vicente Place connects to Fields Parade to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Vicente Place is classified as a Secondary Collector road under the one network road classification (ONRC). Vicente Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vicente Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vicente Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Fields Parade: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Vicente Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vicente Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vickerman Street (Otara)

The speed limit on Vickerman Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vickerman Street connects to Oconnor Street to the north and Flat Bush Road to the south. This road provides access to residential properties and is approximately 0.26km in length.</p> <p>Vickerman Street is classified as an Access road under the one network road classification (ONRC). Vickerman Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vickerman Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 176 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Vickerman Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Oconnor Street: 50km/h (proposed 30km/h)</li> <li>Flat Bush Road: 50km/h (proposed 30km/h)</li> <li>Don Place: 50km/h (proposed 30km/h)</li> <li>Elsa Lane: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vickerman Street has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vickerman Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Victoria Road (Devonport)

The speed limit on Victoria Road, Devonport, between Albert Road and northern end of Victoria Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Victoria Road connects to Abbotsford Terrace to the north and King Edward Parade to the south. This road provides access to residential properties and is approximately 0.43km in length.</p> <p>Victoria Road is classified as a Primary Collector road under the one network road classification (ONRC). Victoria Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Victoria Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 821 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Victoria Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Abbotsford Terrace: 50 km/h (proposed 30 km/h)</li> <li>• King Edward Parade: 50 km/h (no proposed change)</li> <li>• Queens Parade: 50 km/h (no proposed change)</li> <li>• Marine Square: 50 km/h (no proposed change)</li> <li>• Flagstaff Terrace: 50 km/h (no proposed change)</li> <li>• Clarence Street: 50 km/h (no proposed change)</li> <li>• Fleet Street: 50 km/h (no proposed change)</li> <li>• Rattray Street: 50 km/h (no proposed change)</li> <li>• Kerr Street: 50 km/h (no proposed change)</li> <li>• Calliope Road: 50 km/h (no proposed change)</li> <li>• Hastings Parade: 50 km/h (proposed 30 km/h)</li> <li>• Albert Road: 50 km/h (no proposed change)</li> <li>• Ewen Alison Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Owens Road: 50 km/h (proposed 30 km/h)</li> <li>• Patuone Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Mozeley Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Victoria Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.

- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Victoria Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Victoria Road is a Primary Collector Road, that is not the intended function of this section of Victoria Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – View Road (Mangere)

The speed limit on View Road, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>View Road connects to Thomas Road to the west. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>View Road is classified as an Access road under the one network road classification (ONRC). View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of View Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Thomas Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps View Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – View Road (Mount Eden)

The speed limit on View Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>View Road connects to Dominion Road to the west and Mount Eden Road to the east. This road provides access to residential properties and is approximately 0.90km in length.</p> <p>View Road is classified as a Primary collector road under the one network road classification (ONRC). View Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one serious, one minor and one non-injury crash. This resulted in one Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for View Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7179 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of View Road has a mean operating speed in the range of 35-39km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Dominion Road: 50km/h (no proposed change)</li> <li>• Alderley Road: 50km/h (proposed 30km/h)</li> <li>• Kawaka Road: 50km/h (proposed 30km/h)</li> <li>• Wynyard Road: 50km/h (proposed 30km/h)</li> <li>• Horoeke Avenue: 50km/h (proposed 30km/h)</li> <li>• Sherbourne Road: 50km/h (proposed 30km/h)</li> <li>• Esplanade Road: 50km/h (proposed 30km/h)</li> <li>• Mount Eden Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps View Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.13. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for View Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that View Road is a Primary Collector road, this is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Viking Avenue (Hillsborough)

The speed limit on Viking Avenue, Hillsborough has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Viking Avenue connects to Carlton Street to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Viking Avenue is classified as a Access road under the one network road classification (ONRC). Viking Avenue is a two-way, Two lane undivided. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Viking Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Carlton Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Viking Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.20. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Viking Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Villarosa Lane (Flat Bush)

The speed limit on Villarosa Lane, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Villarosa Lane connects to Baverstock Road to the east and Greenbrooke Drive to the west. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Villarosa Lane is classified as an Access road under the one network road classification (ONRC). Villarosa Lane is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Villarosa Lane were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Villarosa Lane has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Baverstock Road: 50km/h (proposed 30km/h)</li> <li>• Greenbrooke Drive: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Villarosa Lane has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Villarosa Lane, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vilma Place (Otara)

The speed limit on Vilma Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vilma Place connects to Cobham Crescent to the south. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>Vilma Place is classified as an Access road under the one network road classification (ONRC). Vilma Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vilma Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Vilma Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vilma Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vilma Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vine Street (Mangere East)

The speed limit on Vine Street, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vine Street connects to Tennessee Avenue to the north and Massey Road to the east. This road provides access to residential properties and is approximately 1.14km in length.</p> <p>Vine Street is classified as a Primary Collector road under the one network road classification (ONRC). Vine Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records sixteen crashes between 2016 and 2020: one serious crash, seven minor crashes, eight non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vine Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1645 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vine Street has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tennessee Avenue: 50km/h (proposed 30km/h)</li> <li>• Massey Road: 50km/h (no proposed change)</li> <li>• Driver Road: 50km/h (proposed 30km/h)</li> <li>• Cleek Road: 50km/h (proposed 30km/h)</li> <li>• Farmer Street: 50km/h (proposed 30km/h)</li> <li>• Wakelin Road: 50km/h (proposed 30km/h)</li> <li>• Blake Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vine Street has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vine Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Vine Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Vinewood Drive (Albany)

The speed limit on Vinewood Drive, Albany has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vinewood Drive connects to Bass Road to the east. This road provides access to residential properties and is approximately 0.37km in length.</p> <p>Vinewood Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Vinewood Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vinewood Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Vinewood Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Bass Road: 50km/h (proposed 30km/h)</li> <li>Mahoney Drive: 50km/h (proposed 30km/h)</li> <li>Roanoke Way: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Vinewood Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Vinewood Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Volta Place (Clendon Park)

The speed limit on Volta Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Volta Place connects to Templeton Place to the west. This road provides access to residential properties and is approximately 0.57km in length.</p> <p>Volta Place is classified as an Access road under the one network road classification (ONRC). Volta Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Volta Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 3 to &lt;5 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 350 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Volta Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Templeton Place: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Volta Place has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Volta Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waddon Place (Mangere)

The speed limit on Waddon Place, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waddon Place connects to Mascot Avenue to the east and Orly Avenue to the west. This road provides access to residential properties and is approximately 0.46km in length.</p> <p>Waddon Place is classified as an Access road under the one network road classification (ONRC). Waddon Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: three minor crashes, four non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waddon Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as commercial big box using MegaMaps tool. The IRR defines commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 582 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waddon Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Mascot Avenue: 50km/h (proposed 30km/h)</li> <li>Orly Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waddon Place has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 1.78. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waddon Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wade Street (Blockhouse Bay)

The speed limit on Wade Street, Blockhouse Bay has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wade Street connects to Endeavour Street to the west. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Wade Street is classified as an Access road under the one network road classification (ONRC). Wade Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wade Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 478 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wade Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Endeavour Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wade Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wade Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wai Iti Place (Clendon Park)

The speed limit on Wai Iti Place, Clendon Park has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wai Iti Place connects to Finlayson Avenue to the east. This road provides access to residential properties and is approximately 0.32km in length.</p> <p>Wai Iti Place is classified as an Access road under the one network road classification (ONRC). Wai Iti Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wai Iti Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 250 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wai Iti Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Finlayson Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wai Iti Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wai Iti Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waikare Road (Otahuhu)

The speed limit on Waikare Road, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waikare Road connects to Papaku Road to the north and Church Street to the west. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Waikare Road is classified as an Access road under the one network road classification (ONRC). Waikare Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waikare Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 228 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waikare Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Papaku Road: 50km/h (proposed 30km/h)</li> <li>• Church Street between Princes Street and Ngaio Street: 50km/h (proposed 30km/h)</li> <li>• Tahatai Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Waikare Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waikare Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waimahia Avenue (Weymouth)

The speed limit on Waimahia Avenue, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimahia Avenue connects to Waimarino Road to the east and Weymouth Road to the west. This road provides access to residential properties and is approximately 0.79km in length.</p> <p>Waimahia Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Waimahia Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics (e) Waimahia Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1612 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waimahia Avenue has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimarino Road: 50km/h (proposed 30km/h)</li> <li>Weymouth Road: 50km/h (proposed 30km/h)</li> <li>Taatahi Street: 50km/h (proposed 30km/h)</li> <li>Reremanu Place: 50km/h (proposed 30km/h)</li> <li>Piriti Place: 50km/h (proposed 30km/h)</li> <li>Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>Justamere Place: 50km/h (proposed 30km/h)</li> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waimahia Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.58. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waimahia Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waimai Avenue (Weymouth)

The speed limit on Waimai Avenue, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimai Avenue connects to Weymouth Road to the east and Domain Road to the west. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Waimai Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Waimai Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two minor crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waimai Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1111 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waimai Avenue has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Weymouth Road: 50km/h (proposed 30km/h)</li> <li>• Domain Road: 50km/h (proposed 30km/h)</li> <li>• Lane Road: 50km/h (proposed 30km/h)</li> <li>• Huber Street: 50km/h (proposed 30km/h)</li> <li>• Estuary Road: 50km/h (proposed 30km/h)</li> </ul>

#### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waimai Avenue has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

#### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waimai Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waimarino Road (Weymouth)

The speed limit on Waimarino Road, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimarino Road connects to Waimahia Avenue to the north and Taatahi Street to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Waimarino Road is classified as an Access road under the one network road classification (ONRC). Waimarino Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waimarino Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waimarino Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>Taatahi Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waimarino Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waimarino Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waimate Street (Otara)

The speed limit on Waimate Street, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimate Street connects to Preston Road to the east and Oconnor Street to the north. This road provides access to residential properties and is approximately 0.54km in length.</p> <p>Waimate Street is classified as an Access road under the one network road classification (ONRC). Waimate Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waimate Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 738 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waimate Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Preston Road: 50km/h (no proposed change)</li> <li>• Oconnor Street: 50km/h (proposed 30km/h)</li> <li>• Flat Bush Road: 50km/h (proposed 30km/h)</li> <li>• Antych Place: 50km/h (proposed 30km/h)</li> <li>• Piako Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waimate Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.82. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waimate Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wainoni Avenue (Point Chevalier)

The speed limit on Wainoni Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wainoni Avenue connects to Shaftesbury Avenue to the west and Maranui Avenue to the east. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Wainoni Avenue is classified as an Access road under the one network road classification (ONRC). Wainoni Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wainoni Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wainoni Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Shaftesbury Avenue: 50 km/h (proposed 30 km/h)</li> <li>Maranui Avenue: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wainoni Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wainoni Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wainui Avenue (Point Chevalier)

The speed limit on Wainui Avenue, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wainui Avenue connects to Point Chevalier Road to the west. This road provides access to residential properties and is approximately 0.59km in length.</p> <p>Wainui Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Wainui Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wainui Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wainui Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> <li>Walford Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wainui Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.80. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wainui Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waipareira Avenue (Henderson)

The speed limit on Waipareira Avenue, Henderson, between 200m north of Woodford Avenue and the northern end of Waipareira Avenue, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waipareira Avenue connects to Te Pai Place to the north and Woodford Avenue to the south. This road provides access to residential properties and is approximately 0.35km in length.</p> <p>Waipareira Avenue is classified as an Arterial road under the one network road classification (ONRC). Waipareira Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waipareira Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using MegaMaps tool. The IRR defines Commercial big box as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2005 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>
(k) Setting of Speed Limits Rule 2017	The requirements of the Setting of Speed Limits Rule 2017 are met as shown in Table 3
(l) WK Traffic Note 37-Revision 2	The requirements of WK Traffic Note 37-Revision2 are met as shown in Table 3

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waipareira Avenue has a mean operating speed in the range of 35-39km/h.</p> <p>According to MegaMaps, the average pick-up and drop-off operating speeds are 22.7km/h.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Te Pai Place: 50km/h (no proposed change)</li> <li>Woodford Avenue: 50km/h (no proposed change)</li> <li>Moselle Avenue: 50km/h (proposed variable 30km/h and 50km/h)</li> </ul>
Auckland Transport Vision Zero	The proposed speed limit for this section of Waipareira Avenue will align with Auckland Transport's Vision Zero approach

In addition to the factors outlined in Table 1, further relevant information was sought to meet the requirements of WK Traffic Note 37-Revision 2 and the Setting of Speed Limits Rule 2017 as summarised in Table 3 below.

Table 3: Required Information

Required Information	Data & Source
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<p>With reference to WK Traffic Note 37-Revision 2, a road controlling authority may set a 40km/h variable speed limit in a school zone under the following conditions:</p> <p>(a) <i>There is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and the traffic on the road outside the school meets at least one of the following conditions:</i></p> <p>(i) <i>The mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(ii) <i>The 85<sup>th</sup> percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(iii) <i>There have been pedestrian, cycle or speed-related crashes near the school in the previous five years; or</i></p> <p>(iv) <i>The school-related activity in condition 5(a) occurs on a main traffic route; or</i></p> <p>(b) <i>There is school-related pedestrians or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside and safe and appropriate traffic engineering measures are installed so that the mean operating speeds of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating</i></p>	<p>The requirements of condition “b” are met as follows:</p> <p>A 2021 Annual Survey Report for ACG Sunderland found that in total there were 63 schoolchildren walking on the road outside the school around the schools pick up and drop off hours.</p> <p>Furthermore, according to MegaMaps, the average pick-up and drop-off operating speeds are 22.7km/h.</p>
<p>With reference to the Setting of Speed Limits Rule 2017, a variable speed limit may apply when:</p> <p>(a) <i>The speed limit needs to vary in order to be safe and appropriate; and</i></p> <p>(b) <i>It is necessary to address or manage one or more of the following situations or environments</i></p>	<p>The requirements of condition “a” are met due to the observed activity on the road in front of the school around pick-up and drop-off hours, as specified above. It has been determined that since the walking activity around the school is largely concentrated around pick-up and drop-off hours, a variable speed limit would be suitable.</p> <p>The requirements of condition “b (ii)” are met due to the type of road users during the hours of operation of the proposed variable speed zone being primarily schoolchildren, which is not the</p>

<p>(i) <i>Different numbers and types of road users or different traffic movements; or</i></p> <p>(ii) <i>The effects of changing traffic volumes, including to ease congestion; or</i></p> <p>(iii) <i>For emergency or temporary traffic management; or</i></p> <p>(iv) <i>A crash risk posed by turning or crossing traffic; or</i></p> <p>(v) <i>Changing environmental conditions</i></p>	<p>case outside of the hours of operation for the proposed variable speed zone.</p>
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**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Waipareira Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.97. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = Variable 30km/h and 50km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Moselle Avenue, according to MegaMaps, the average pick up and drop off operating speeds, i.e. the operating speeds at times of heightened school-related activity, are less than 30km/h.

As outlined in Table 3, an assessment has been undertaken to determine if the warrant is met for a 40km/h variable speed school zone.

While the conditions required for a variable 40km/h speeds limit are met, Waka Kotahi have indicated that variable 30km/h speed limits would be appropriate if the operating speeds during the times of variable speed limit operation were less than 30km/h and they are notified of the proposal. Waka Kotahi will be notified of this proposal for a variable 30km/h speed limit prior to public consultation.

Due to the existing pick up and drop off operating speeds we have determined a variable 30km/h speed limit during school drop off and pick up times to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wairata Place (Te Atatu South)

The speed limit on Wairata Place, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wairata Place connects to Tiroroa Avenue to the north. This road provides access to residential properties and is approximately 0.22 km in length.</p> <p>Wairata Place is classified as an access road under the one network road classification (ONRC). Wairata Place is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 310 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wairata Place has a mean operating speed in the range of &lt;30 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Lyndhurst Road: 50 km/h (proposed 30 km/h)</li> <li>Wakeling Avenue: 50 km/h (proposed 30 km/h)</li> <li>Wairata Place: 50 km/h (proposed 30 km/h)</li> <li>Taha Road: 50 km/h (proposed 30 km/h)</li> <li>Te Atatu Road: 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wairata Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.17 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wairata Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wairau Place (Pukekohe)

The speed limit on Wairau Place, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wairau Place connects to Helvetia Road to the east. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Wairau Place is classified as an Access road under the one network road classification (ONRC). Wairau Place is a two-way, Two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wairau Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wairau Place has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Helvetia Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wairau Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wairau Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waitemata Drive (Ranui)

The speed limit on Waitemata Drive, Ranui, between Luanda Drive and the northern end of Waitemata Drive, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waitemata Drive connects to Karepo Crescent to the north and Marinich Drive to the south. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Waitemata Drive is classified as a Secondary Collector road under the one network road classification (ONRC). Waitemata Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: one minor crash, two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waitemata Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1572 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waitemata Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Karepo Crescent: 50km/h (proposed 30km/h)</li> <li>Marinich Drive: 50km/h (no proposed change)</li> <li>Swanson Road: 50km/h (no proposed change)</li> <li>Craiburn Street: 50km/h (no proposed change)</li> <li>Drummond Drive: 50km/h (no proposed change)</li> <li>Luanda Drive between Waitemata Drive roundabout and Swanson Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waitemata Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waitemata Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waitoa Street (Parnell)

The speed limit on Waitoa Street, Parnell has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waitoa Street connects to Papahia Street to the north and Lichfield Road to the west. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Waitoa Street is classified as an Access road under the one network road classification (ONRC). Waitoa Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waitoa Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waitoa Street has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Papahia Street: 50km/h (proposed 30km/h)</li> <li>• Lichfield Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Waitoa Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waitoa Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wakelin Road (Mangere East)

The speed limit on Wakelin Road, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wakelin Road connects to Vine Street to the north. This road provides access to residential properties and is approximately 0.20km in length.</p> <p>Wakelin Road is classified as a Primary Collector road under the one network road classification (ONRC). Wakelin Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wakelin Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3172 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wakelin Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Vine Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wakelin Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 50km/h as the safe and appropriate speed for Wakelin Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Wakelin Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wakeling Avenue (Te Atatu South)

The speed limit on Wakeling Avenue, Te Atatu South has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wakeling Avenue connects to Tiroroa Avenue to the east and Te Atatu Road to the west. This road provides access to residential properties and is approximately 0.31 km in length.</p> <p>Wakeling Avenue is classified as an access road under the one network road classification (ONRC). Wakeling Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Road Name were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 217 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wakeling Avenue has a mean operating speed in the range of <30 km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Fairlea Road: 50 km/h (proposed 30 km/h)</li> <li>• Tiroroa Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Te Atatu Road: 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wakeling Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**
- o The Infrastructure Risk Rating Score is 2.15 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wakeling Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Walford Road (Point Chevalier)

The speed limit on Walford Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Walford Road connects to Oliver Street to the north and Meola Road to the south. This road provides access to residential properties and is approximately 0.72km in length.</p> <p>Walford Road is classified as a Primary Collector road under the one network road classification (ONRC). Walford Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Walford Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3337 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Walford Road has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Oliver Street: 50 km/h (proposed 30 km/h)</li> <li>Dignan Street: 50 km/h (proposed 30 km/h)</li> <li>Seacombe Road: 50 km/h (proposed 30 km/h)</li> <li>Te Ra Road: 50 km/h (proposed 30 km/h)</li> <li>Newell Street: 50 km/h (proposed 30 km/h)</li> <li>Buxton Street: 50 km/h (proposed 30 km/h)</li> <li>Wainui Avenue: 50 km/h (proposed 30 km/h)</li> <li>Meola Road: 50 km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Walford Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.32. For urban areas this corresponds to an IRR band of **Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Walford Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Walford Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Walker Road (Point Chevalier)

The speed limit on Walker Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Walker Road connects to Kenneth Small Crescent to the west and Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.77km in length.</p> <p>Walker Road is classified as a Secondary Collector road under the one network road classification (ONRC). Walker Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Walker Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2447 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Walker Road has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Point Chevalier Road: 50 km/h (no proposed change)</li> <li>• Neville Street: 50 km/h (proposed 30 km/h)</li> <li>• Muripara Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Pelham Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Maranui Avenue: 50 km/h (proposed 30 km/h)</li> <li>• Rama Road: 50 km/h (proposed 30 km/h)</li> <li>• Hawea Road: 50 km/h (proposed 30 km/h)</li> <li>• Maryland Street: 50 km/h (proposed 30 km/h)</li> <li>• Kenneth Small Crescent: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Walker Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.33. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Walker Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Walters Road (Takanini)

The speed limit on Walters Road, Takanini, between Cosgrave Road and Grove Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Walters Road connects to Cosgrave Road to the east and Great South Road to the west. This section of Walters road provides access to residential properties and is approximately 0.52km in length.</p> <p>Walters Road is classified as a Primary Collector road under the one network road classification (ONRC). Walters Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twelve crashes between 2016 and 2020: one serious crash, two minor crashes, nine non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Walters Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> High and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as controlled access using MegaMaps tool. The IRR defines controlled access as "Road with roadside development and controlled access, such as an urban state highway or arterial where there are few accesses to the road e.g. as a result of a service road. Some pedestrian and cyclist activity may also be present but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8163 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Electronic variable speed limit signs are proposed for the implementation of the proposed speed limit. Pedestrian improvements to provide for children crossing the road between the school and the new subdivision to the north have also been recently implemented.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools, or 40km/h speed limits where 30km/h is not appropriate due to the existing function or use of the road.</p> <p>Key stakeholders have indicated general support for implementing reduced speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>
(k) Setting of Speed Limits Rule 2017	The requirements of the Setting of Speed Limits Rule 2017 are met as shown in Table 3
(l) WK Traffic Note 37-Revision 2	The requirements of WK Traffic Note 37-Revision2 are met as shown in Table 3

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Walters Road has a mean operating speed in the range of 50-54km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Cosgrave Road: 80km/h (no proposed change)</li> <li>Grove Road: 50km/h (no proposed change)</li> <li>Kaha Road: 50km/h (no proposed change)</li> <li>Castlepoint Avenue: 50km/h (no proposed change)</li> <li>Opoka Street: 50km/h (no proposed change)</li> </ul>

In addition to the factors outlined in Table 1, further relevant information was sought to meet the requirements of WK Traffic Note 37-Revision 2 and the Setting of Speed Limits Rule 2017 as summarised in Table 3 below.

Table 3: Required Information

Required Information	Data & Source
<p>With reference to WK Traffic Note 37-Revision 2, a road controlling authority may set a 40km/h variable speed limit in a school zone under the following conditions:</p> <p>(a) <i>There is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and the traffic on the road outside the school meets at least one of the following conditions:</i></p> <p>(i) <i>The mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(ii) <i>The 85<sup>th</sup> percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating); or</i></p> <p>(iii) <i>There have been pedestrian, cycle or speed-related crashes near the school in the previous five years; or</i></p> <p>(iv) <i>The school-related activity in condition 5(a) occurs on a main traffic route; or</i></p> <p>(b) <i>There is school-related pedestrians or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside and safe and appropriate traffic engineering measures are installed so that the mean operating speeds of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating</i></p>	<p>The requirements of condition “a” are met as follows:</p> <p>Due to the recent residential development in the surrounding area which has increased pedestrian activity along and across Walters Road directly outside the school. (note that due to the school being temporarily closed as a result of COVID lockdowns, pedestrian counts have been unable to be carried out.)</p> <p>According to MegaMaps, this section of Walters Road has a mean operating speed in the range of 50-54km/h</p> <p>Furthermore, Walters Road is classified as a Primary Collector Road and is a main traffic route.</p>
<p>With reference to the Setting of Speed Limits Rule 2017, a variable speed limit may apply when:</p> <p>(a) <i>The speed limit needs to vary in order to be safe and appropriate; and</i></p>	<p>The requirements of condition “a” are met as specified above. It has been determined that since the walking activity around the school is largely concentrated around pick-up and drop-off hours, a variable speed limit would be suitable.</p> <p>The requirements of condition “b (ii)” are met due to the type of road users during the hours of</p>

<p>(b) <i>It is necessary to address or manage one or more of the following situations or environments</i></p> <p>(i) <i>Different numbers and types of road users or different traffic movements; or</i></p> <p>(ii) <i>The effects of changing traffic volumes, including to ease congestion; or</i></p> <p>(iii) <i>For emergency or temporary traffic management; or</i></p> <p>(iv) <i>A crash risk posed by turning or crossing traffic; or</i></p> <p>(v) <i>Changing environmental conditions</i></p>	<p>operation of the proposed variable speed zone being primarily schoolchildren, which is not the case outside of the hours of operation for the proposed variable speed zone.</p>
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**Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Walters Road has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = variable 40km/h and 50km/h.*

As outlined in Table 3, an assessment has been undertaken to determine if the warrant is met for a 40km/h variable speed school zone.

Walters Road has been determined to meet the requirements set out in the New Zealand Transport Agency’s Traffic Note 37-Revision 2. Therefore, we have determined a variable 40km/h speed limit to be safer and more appropriate as it have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Variable speed limits are proposed to be implemented with electronic variable signs on approaches to the school.

## Speed Limit Review – Wanstead Way (Mangere)

The speed limit on Wanstead Way, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wanstead Way connects to Canning Crescent to the north. This road provides access to residential properties and is approximately 0.82km in length.</p> <p>Wanstead Way is classified as an Access road under the one network road classification (ONRC). Wanstead Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one serious crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wanstead Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box/Industrial using MegaMaps tool. The IRR defines Commercial Big Box/Industrial as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wanstead Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Canning Crescent: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wanstead Way has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wanstead Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Warden Place (Mangere Bridge)

The speed limit on Warden Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Warden Place connects to Ambury Road to the south. This road provides access to residential properties and is approximately 0.33km in length.  Warden Place is classified as a Access road under the one network road classification (ONRC). Warden Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Warden Place were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1136 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Warden Place has a mean operating speed in the range of 30-34km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Ambury Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Warden Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.30. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Warden Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Water Street (Otahuhu)

The speed limit on Water Street, Otahuhu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Water Street connects to Avenue Road to the north and Harmony Avenue to the south. This road provides access to residential properties and is approximately 0.47km in length.</p> <p>Water Street is classified as a Primary Collector road under the one network road classification (ONRC). Water Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: two minor crashes, six non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Water Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 998 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Water Street has a mean operating speed in the range of <30km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Avenue Road between Atkinson Avenue and the eastern end of Atkinson Avenue: 50km/h (proposed 30km/h)</li> <li>• Harmony Avenue: 50km/h (proposed 30km/h)</li> <li>• Trenwith Street between Atkinson Avenue and the eastern end of Atkinson Avenue: 50km/h (proposed 30km/h)</li> <li>• High Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Water Street has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Water Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Water Street is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waterlea Avenue (Mangere Bridge)

The speed limit on Waterlea Avenue, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waterlea Avenue connects to Ambury Road to the east and Ashcroft Avenue to the west. This road provides access to residential properties and is approximately 0.89km in length.</p> <p>Waterlea Avenue is classified as a Access road under the one network road classification (ONRC). Waterlea Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waterlea Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 561 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waterlea Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ambury Road: 50km/h (proposed 30km/h)</li> <li>Ashcroft Avenue: 50km/h (proposed 30km/h)</li> <li>Anarahi Place: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waterlea Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waterlea Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waters Place (Kelston)

The speed limit on Waters Place, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waters Place connects to Great North Road to the south. This road provides access to residential properties and is approximately 0.10km in length.</p> <p>Waters Place is classified as an Access road under the one network road classification (ONRC). Waters Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waters Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waters Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Great North Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Waters Place has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waters Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Waterview Road (Stanley Point)**

The speed limit on Waterview Road, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waterview Road connects to William Bond Street to the east and Glen Road to the west. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Waterview Road is classified as a Secondary Collector road under the one network road classification (ONRC). Waterview Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waterview Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 559 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waterview Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• William Bond Street: 50 km/h (proposed 30 km/h)</li> <li>• Glen Road: 50 km/h (proposed 30 km/h)</li> <li>• Russell Street: 50 km/h (proposed 30 km/h)</li> <li>• Summer Street: 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Waterview Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Waterview Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Watervista Place (Mangere Bridge)

The speed limit on Watervista Place, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Watervista Place connects to House Avenue to the east. This road provides access to residential properties and is approximately 0.61km in length.</p> <p>Watervista Place is classified as a Access road under the one network road classification (ONRC). Watervista Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Watervista Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 462 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Watervista Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>House Avenue: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Watervista Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Watervista Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wattle Street (Kelston)

The speed limit on Wattle Street, Kelston has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wattle Street connects to Rimu Street to the north and Great North Road to the south. This road provides access to residential properties and is approximately 0.45km in length.</p> <p>Wattle Street is classified as a Secondary Collector road under the one network road classification (ONRC). Wattle Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wattle Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1298 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wattle Street has a mean operating speed in the range of 36km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rimu Street: 50km/h (proposed 30km/h)</li> <li>Great North Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wattle Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wattle Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wayne Drive (Mangere)

The speed limit on Wayne Drive, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wayne Drive connects to Friesian Drive to the east and Duggan Avenue to the west. This road provides access to residential properties and is approximately 0.85km in length.</p> <p>Wayne Drive is classified as an Access road under the one network road classification (ONRC). Wayne Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wayne Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 301 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wayne Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Friesian Drive: 50km/h (proposed 30km/h)</li> <li>Duggan Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wayne Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wayne Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Welcome Place (Henderson)

The speed limit on Welcome Place, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Welcome Place connects to Rathgar Road to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Welcome Place is classified as an Access road under the one network road classification (ONRC). Welcome Place is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Welcome Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 349 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Welcome Place has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Rathgar Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Welcome Place has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Welcome Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wellington Street (Pukekohe)

The speed limit on Wellington Street, Pukekohe, between Ward Street and Kitchener Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wellington Street connects to Harris Street to the north and Kitchener Road to the south. This road provides access to residential properties and is approximately 0.71km in length.</p> <p>Wellington Street is classified as an Access road under the one network road classification (ONRC). Wellington Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wellington Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wellington Street has a mean operating speed in the range of 30-34km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Ward Street: 50km/h (no proposed change)</li> <li>• Kitchener Road: 50km/h (no proposed change)</li> <li>• Harris Road: 50km/h (no proposed change)</li> <li>• Fairfield Street: 50km/h (no proposed change)</li> <li>• Laurie Avenue: 50km/h (no proposed change)</li> <li>• Beresford Street: 50km/h (no proposed change)</li> <li>• Russell Avenue: 50km/h (no proposed change)</li> <li>• Philip Street: 50km/h (no proposed change)</li> <li>• Fair Oaks: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wellington Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wellington Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – West Palms Way (Pukekohe)

The speed limit on West Palms Way, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>West Palms Way connects to Princes Street West to the south. This road provides access to residential properties and is approximately 0.06km in length.</p> <p>West Palms Way is classified as an Access road under the one network road classification (ONRC). West Palms Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for West Palms Way were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of West Palms Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Princes Street West: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps West Palms Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for West Palms Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Westvale Avenue (Ranui)

The speed limit on Westvale Avenue, Ranui has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Westvale Avenue connects to Kilmarnock Avenue to the north and to the south. This road provides access to residential properties and is approximately 0.09km in length.</p> <p>Westvale Avenue is classified as an Access road under the one network road classification (ONRC). Westvale Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Westvale Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 131 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Westvale Avenue has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Kilmarnock Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Westvale Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.74. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Westvale Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Westwell Road (Belmont)

The speed limit on Westwell Road, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Westwell Road connects to Seacliffe Avenue to the east and Lake Road to the west. This road provides access to residential properties and is approximately 0.43km in length.</p> <p>Westwell Road is classified as a Secondary Collector road under the one network road classification (ONRC). Westwell Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Westwell Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1125 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Westwell Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Seacliffe Avenue: 50km/h (proposed 30km/h)</li> <li>Lake Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Westwell Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Westwell Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Weymouth Road (Weymouth)

The speed limit on Weymouth Road, Weymouth, between Waimahia Avenue and the southern end of Weymouth Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Weymouth Road connects to Roscommon Road to the north and Lawson Way to the south. This road provides access to residential properties and is approximately 1.16km in length.</p> <p>Weymouth Road is classified as a Primary Collector road under the one network road classification (ONRC). Weymouth Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records nineteen crashes between 2016 and 2020: one fatal crash, two serious crashes, one minor crash, fifteen non-injury crashes. This resulted in three Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Weymouth Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5773 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Weymouth Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Roscommon Road: 60km/h (no proposed change)</li> <li>• Lawson Way: 50km/h (proposed 30km/h)</li> <li>• Beihlers Road: 50km/h (proposed 30km/h)</li> <li>• Roys Road: 50km/h (proposed 30km/h)</li> <li>• Hazards Road: 50km/h (proposed 30km/h)</li> <li>• Mcinnes Road: 50km/h (proposed 30km/h)</li> <li>• Greers Road: 50km/h (proposed 30km/h)</li> <li>• Mcleod Road: 50km/h (proposed 30km/h)</li> <li>• Estuary Road: 50km/h (proposed 30km/h)</li> <li>• Waimai Avenue: 50km/h (proposed 30km/h)</li> <li>• Gibbons Road: 50km/h (proposed 30km/h)</li> <li>• Blanes Road: 50km/h (proposed 30km/h)</li> <li>• Adel Place: 50km/h (proposed 30km/h)</li> <li>• Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>• Settlers Cove: 50km/h (proposed 30km/h)</li> <li>• Gila Place: 50km/h (proposed 30km/h)</li> <li>• Etherton Drive: 50km/h (proposed 30km/h)</li> <li>• Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

	<ul style="list-style-type: none"> <li>• Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>• Taitimu Drive: 50km/h (proposed 30km/h)</li> </ul>
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### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Weymouth Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 1.94. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Weymouth Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Weymouth Road is a Primary Collector Road, that is not the intended function of this section of Weymouth Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Weymouth Road (Weymouth)

The speed limit on Weymouth Road, Weymouth, between Roscommon Road and Waimahia Avenue, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Weymouth Road connects to Roscommon Road to the north and Lawson Way to the south. This road provides access to residential properties and is approximately 1.09km in length.</p> <p>Weymouth Road is classified as an Arterial road under the one network road classification (ONRC). Weymouth Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty nine crashes between 2016 and 2020: two serious crashes, five minor crashes, twenty two non-injury crashes. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Weymouth Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9891 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Weymouth Road has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Roscommon Road: 60km/h (no proposed change)</li> <li>Lawson Way: 50km/h (proposed 30km/h)</li> <li>Beihlers Road: 50km/h (proposed 30km/h)</li> <li>Roys Road: 50km/h (proposed 30km/h)</li> <li>Hazards Road: 50km/h (proposed 30km/h)</li> <li>Mcinnes Road: 50km/h (proposed 30km/h)</li> <li>Greers Road: 50km/h (proposed 30km/h)</li> <li>Mcleod Road: 50km/h (proposed 30km/h)</li> <li>Estuary Road: 50km/h (proposed 30km/h)</li> <li>Waimai Avenue: 50km/h (proposed 30km/h)</li> <li>Gibbons Road: 50km/h (proposed 30km/h)</li> <li>Blanes Road: 50km/h (proposed 30km/h)</li> <li>Adel Place: 50km/h (proposed 30km/h)</li> <li>Waimahia Avenue: 50km/h (proposed 30km/h)</li> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> <li>Gila Place: 50km/h (proposed 30km/h)</li> <li>Etherton Drive: 50km/h (proposed 30km/h)</li> <li>Becker Drive: 50km/h (proposed 30km/h)</li> </ul>

	<ul style="list-style-type: none"> <li>• Kaimoana Street: 50km/h (proposed 30km/h)</li> <li>• Taitimu Drive: 50km/h (proposed 30km/h)</li> <li>• Hanan Place: 50km/h (proposed 30km/h)</li> <li>• Hanan Place: 50km/h (proposed 30km/h)</li> <li>• Damian Way: 50km/h (proposed 30km/h)</li> <li>• Palmers Road: 50km/h (proposed 30km/h)</li> <li>• Mahia Road: 50km/h (no proposed change)</li> <li>• Alfriston Road: 50km/h (no proposed change)</li> <li>• Great South Road: 50km/h (no proposed change)</li> <li>• Beaumonts Way: 50km/h (no proposed change)</li> <li>• Selwyn Road: 50km/h (no proposed change)</li> </ul>
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### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Weymouth Road has the following information:

- Collective Risk band of **Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.42. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Weymouth Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Weymouth Road is an Arterial Road, that is not the intended function for this section of Weymouth Road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Whakapono Road (Pukekohe)**

The speed limit on Whakapono Road, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Whakapono Road connects to Raoriki Road to the west. This road provides access to residential properties and is approximately 0.11km in length.</p> <p>Whakapono Road is classified as an Access road under the one network road classification (ONRC). Whakapono Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Whakapono Road were estimated using MegaMaps tool.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5) and narrow shoulder (0.5m to &lt;1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was estimated from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Whakapono Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Raoriki Road: 50 km/h (proposed 30 km/h)</li> <li>• Princes Street West: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Whakapono Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Whakapono Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wheatley Avenue (Pakuranga)

The speed limit on Wheatley Avenue, Pakuranga has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wheatley Avenue connects to Ti Rakau Drive to the east. This road provides access to residential properties and is approximately 0.12km in length.</p> <p>Wheatley Avenue is classified as a Access road under the one network road classification (ONRC). Wheatley Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wheatley Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wheatley Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Ti Rakau Drive: 60km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wheatley Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wheatley Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Whitley Crescent (Otago)

The speed limit on Whitley Crescent, Otago has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Whitley Crescent connects to Everitt Road to the east. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Whitley Crescent is classified as an Access road under the one network road classification (ONRC). Whitley Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Whitley Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 239 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Whitley Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Everitt Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Whitley Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.91. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Whitley Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wicklow Road (Narrow Neck)

The speed limit on Wicklow Road, Narrow Neck has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wicklow Road connects to Montgomery Avenue to the north and Old Lake Road to the south. This road provides access to residential properties and is approximately 0.38km in length.</p> <p>Wicklow Road is classified as an Access road under the one network road classification (ONRC). Wicklow Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wicklow Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wicklow Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Montgomery Avenue: 50km/h (proposed 30km/h)</li> <li>• Old Lake Road: 50km/h (no proposed change)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wicklow Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wicklow Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wickman Way (Mangere East)

The speed limit on Wickman Way, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wickman Way connects to Tennessee Avenue to the north and Buckland Road to the south. This road provides access to residential properties and is approximately 1.00km in length.</p> <p>Wickman Way is classified as a Primary Collector road under the one network road classification (ONRC). Wickman Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records twenty one crashes between 2016 and 2020: two serious crashes, four minor crashes, fifteen non-injury crashes. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wickman Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 11354 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wickman Way has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tennessee Avenue: 50km/h (no proposed change)</li> <li>Buckland Road: 50km/h (no proposed change)</li> <li>Garus Avenue: 50km/h (proposed 30km/h)</li> <li>Chelburn Crescent: 50km/h (proposed 30km/h)</li> <li>Tannock Place: 50km/h (proposed 30km/h)</li> <li>Yates Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wickman Way has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Low-Medium**.
- The Infrastructure Risk Rating Score is 2.68. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wickman Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Wickman Way is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – William Bond Street (Stanley Point)**

The speed limit on William Bond Street, Stanley Point has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>William Bond Street connects to Waterview Road to the north and Calliope Road to the south. This road provides access to residential properties and is approximately 0.34km in length.</p> <p>William Bond Street is classified as a Secondary Collector road under the one network road classification (ONRC). William Bond Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for William Bond Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 673 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of William Bond Street has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Waterview Road: 50 km/h (proposed 30 km/h)</li> <li>• Calliope Road: 50 km/h (no proposed change)</li> <li>• Rutland Road between William Bond Street and Cautley Street: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps William Bond Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for William Bond Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – William Gamble Drive (Greenhithe)

The speed limit on William Gamble Drive, Greenhithe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>William Gamble Drive connects to Kyle Road to the north. This road provides access to residential properties and is approximately 0.52km in length.</p> <p>William Gamble Drive is classified as a Secondary Collector road under the one network road classification (ONRC). William Gamble Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for William Gamble Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1519 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of William Gamble Drive has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kyle Road: 50km/h (proposed 30km/h)</li> <li>George Deane Place: 50km/h (proposed 30km/h)</li> <li>Henry Partington Place: 50km/h (proposed 30km/h)</li> <li>Thomas Hamer Place: 50km/h (proposed 30km/h)</li> <li>Mary Forgham Drive: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps William Gamble Drive has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.55. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for William Gamble Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – William Street (Mangere East)

The speed limit on William Street, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	William Street connects to Ferguson Street to the east. This road provides access to residential properties and is approximately 0.16km in length.  William Street is classified as an Access road under the one network road classification (ONRC). William Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for William Street were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 5 to &lt;10 per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of William Street has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Ferguson Street: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps William Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for William Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Williams Crescent (Otarā)

The speed limit on Williams Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Williams Crescent connects to Hills Road to the west. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Williams Crescent is classified as an Access road under the one network road classification (ONRC). Williams Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Williams Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 249 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Williams Crescent has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Hills Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Williams Crescent has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.17. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Williams Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Williamson Avenue (Belmont)

The speed limit on Williamson Avenue, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Williamson Avenue connects to Seacliffe Avenue to the east and Bayswater Avenue to the west. This road provides access to residential properties and is approximately 0.50km in length.</p> <p>Williamson Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Williamson Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Williamson Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt; 2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1831 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Williamson Avenue has a mean operating speed in the range of 30-34km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Seacliffe Avenue: 50km/h (proposed 30km/h)</li> <li>• Bayswater Avenue: 50km/h (no proposed change)</li> <li>• Lake Road: 50km/h (no proposed change)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Williamson Avenue has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.70. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Williamson Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Willis Avenue (Pukekohe)

The speed limit on Willis Avenue, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Willis Avenue connects to Kitchener Road to the south. This road provides access to residential properties and is approximately 0.19km in length.</p> <p>Willis Avenue is classified as an Access road under the one network road classification (ONRC). Willis Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Willis Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 220 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Willis Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Kitchener Road: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Willis Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Willis Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Willowbrook (Pukekohe)

The speed limit on Willowbrook, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Willowbrook connects to Princes Street West to the north. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Willowbrook is classified as an Access road under the one network road classification (ONRC). Willowbrook is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Willowbrook were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Willowbrook has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Princes Street West: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Willowbrook has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Willowbrook, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wilson Carlile Street (Point Chevalier)

The speed limit on Wilson Carlile Street, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wilson Carlile Street connects to Jack Clark Way to the west and Humariri Street to the east. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Wilson Carlile Street is classified as an Access road under the one network road classification (ONRC). Wilson Carlile Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wilson Carlile Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wilson Carlile Street has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Jack Clark Way: 50 km/h (proposed 30 km/h)</li> <li>Humariri Street: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wilson Carlile Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.90. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wilson Carlile Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Windrush Close (Mangere)

The speed limit on Windrush Close, Mangere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Windrush Close connects to Cornwall Road to the west and Ansty Place to the west. This road provides access to residential properties and is approximately 0.61km in length.  Windrush Close is classified as an Access road under the one network road classification (ONRC). Windrush Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: two serious crashes, one non-injury crash. This resulted in two Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Windrush Close were determined using MegaMaps tool. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 670 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Windrush Close has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Cornwall Road: 50km/h (proposed 30km/h)</li> <li>• Ansty Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Windrush Close has the following information:

- o Collective Risk band of **Low-Medium**, and a Personal Risk band of **High**.
- o The Infrastructure Risk Rating Score is 2.00. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Windrush Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Winscombe Street (Belmont)

The speed limit on Winscombe Street, Belmont has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Winscombe Street connects to Seacliffe Avenue to the east and Lake Road to the west. This road provides access to residential properties and is approximately 0.42km in length.</p> <p>Winscombe Street is classified as a Primary Collector road under the one network road classification (ONRC). Winscombe Street is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor crash, one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Winscombe Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3657 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Winscombe Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Seacliffe Avenue: 50km/h (proposed 30km/h)</li> <li>Lake Road: 50km/h (no proposed change)</li> <li>Baradia Street: 50km/h (no proposed change)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Winscombe Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 1.73. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Winscombe Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Winscombe Street is a Primary Collector Road, that is not its intended function

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Witla Court (Mangere Bridge)**

The speed limit on Witla Court, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Witla Court connects to Muir Avenue to the north. This road provides access to residential properties and is approximately 0.08km in length.</p> <p>Witla Court is classified as a Access road under the one network road classification (ONRC). Witla Court is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Witla Court were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Witla Court has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Witla Court has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Witla Court, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wonderview Road (Leigh)

The speed limit on Wonderview Road, Leigh has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wonderview Road connects to Hauraki Road to the north and Lax Crescent to the west. This road provides access to residential properties and is approximately 0.31km in length.</p> <p>Wonderview Road is classified as a Secondary Collector road under the one network road classification (ONRC). Wonderview Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wonderview Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as rural towns using MegaMaps tool. The IRR defines rural towns as " <i>rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 495 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wonderview Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Hauraki Road between Wonderview Road and north of Hauraki Road: 50km/h (proposed 30km/h)</li> <li>• Lax Crescent: 50km/h (proposed 30km/h)</li> <li>• Barrier View Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wonderview Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.05. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Wonderview Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wood Avenue (Mangere East)

The speed limit on Wood Avenue, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wood Avenue connects to Blake Road to the south. This road provides access to residential properties and is approximately 0.88km in length.</p> <p>Wood Avenue is classified as an Access road under the one network road classification (ONRC). Wood Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wood Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1075 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wood Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Blake Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wood Avenue has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium-High**.
- The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wood Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Woodberry Drive (Flat Bush)

The speed limit on Woodberry Drive, Flat Bush has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodberry Drive connects to Baverstock Road to the north and Plantation Avenue to the south. This road provides access to residential properties and is approximately 0.24km in length.</p> <p>Woodberry Drive is classified as an Access road under the one network road classification (ONRC). Woodberry Drive is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodberry Drive were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1534 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Woodberry Drive has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Baverstock Road: 50km/h (proposed 30km/h)</li> <li>• Plantation Avenue: 50km/h (proposed 30km/h)</li> <li>• Silverwood Drive: 50km/h (proposed 30km/h)</li> <li>• Thyme Court: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Woodberry Drive has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.21. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Woodberry Drive, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Woodcroft Way (Pukekohe)

The speed limit on Woodcroft Way, Pukekohe has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodcroft Way connects to Princes Street West to the north. This road provides access to residential properties and is approximately 0.16km in length.</p> <p>Woodcroft Way is classified as an Access road under the one network road classification (ONRC). Woodcroft Way is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodcroft Way were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Woodcroft Way has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Princes Street West: 50km/h (proposed 30km/h)</li> <li>Cathcart Close: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Woodcroft Way has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.06. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 4: Conclusion

Existing speed limit: 50km/h

Proposed safe and appropriate speed limit recommendation = 30km/h.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Woodcroft Way, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Woodford Road (Mount Eden)

The speed limit on Woodford Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodford Road connects to Valley Road to the north. This road provides access to residential properties and is approximately 0.29km in length.</p> <p>Woodford Road is classified as a Access road under the one network road classification (ONRC). Woodford Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodford Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 400 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Woodford Road has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Valley Road: 50km/h (proposed 30km/h)</li> <li>Conway Road: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Woodford Road has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 1.79. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Woodford Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Woodlark Close (Weymouth)

The speed limit on Woodlark Close, Weymouth has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodlark Close connects to Settlers Cove to the north. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Woodlark Close is classified as an Access road under the one network road classification (ONRC). Woodlark Close is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodlark Close were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1092 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Woodlark Close has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Settlers Cove: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Woodlark Close has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Woodlark Close, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wright Road (Point Chevalier)

The speed limit on Wright Road, Point Chevalier has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wright Road connects to Point Chevalier Road to the east. This road provides access to residential properties and is approximately 0.33km in length.</p> <p>Wright Road is classified as an Access road under the one network road classification (ONRC). Wright Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one serious crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wright Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and wide shoulder (1.0m to &lt;2.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 400 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wright Road has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Point Chevalier Road: 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wright Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.58. For urban areas this corresponds to an IRR band of **Low**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wright Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wrights Spur (Mount Eden)

The speed limit on Wrights Spur, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wrights Spur connects to Brentwood Avenue to the south. This road provides access to residential properties and is approximately 0.04km in length.</p> <p>Wrights Spur is classified as a Access road under the one network road classification (ONRC). Wrights Spur is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wrights Spur were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5 to &lt;1.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wrights Spur has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Brentwood Avenue: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wrights Spur has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.34. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wrights Spur, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wroughton Crescent (Otara)

The speed limit on Wroughton Crescent, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wroughton Crescent connects to Ferguson Road to the north and Athelstan Place to the south. This road provides access to residential properties and is approximately 0.05km in length.</p> <p>Wroughton Crescent is classified as an Access road under the one network road classification (ONRC). Wroughton Crescent is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wroughton Crescent were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and narrow shoulder (0.5m to &lt;1.0m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 234 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wroughton Crescent has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Ferguson Road: 50km/h (proposed 30km/h)</li> <li>Athelstan Place: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wroughton Crescent has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.60. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wroughton Crescent, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wynne Gray Avenue (Stonefields)

The speed limit on Wynne Gray Avenue, Stonefields has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wynne Gray Avenue connects to Tephra Boulevard to the south and Stonemason Avenue to the north. This road provides access to residential properties and is approximately 0.40km in length.</p> <p>Wynne Gray Avenue is classified as an Access road under the one network road classification (ONRC). Wynne Gray Avenue is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020: This Resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wynne Gray Avenue were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5) and Very Narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using MegaMaps tool. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wynne Gray Avenue has a mean operating speed in the range of &lt;30km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Tephra Boulevard: 50km/h (proposed 30km/h)</li> <li>Stonemason Avenue: 50km/h (proposed 30km/h)</li> <li>Tihi Street: 50km/h (proposed 30km/h)</li> <li>Emilia Nixon Lane: 50km/h (proposed 30km/h)</li> <li>Styak Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Wynne Gray Avenue has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### Step 4: Conclusion

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wynne Gray Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wynyard Road (Mount Eden)

The speed limit on Wynyard Road, Mount Eden has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wynyard Road connects to Porters Avenue to the north and View Road to the south. This road provides access to residential properties and is approximately 0.53km in length.</p> <p>Wynyard Road is classified as a Primary collector road under the one network road classification (ONRC). Wynyard Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wynyard Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very wide shoulder (&gt;2.0m)</li><li>• <b>Roadside hazards (in both directions):</b> Severe and Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3120 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wynyard Road has a mean operating speed in the range of 35-39km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Porters Avenue: 50km/h (no proposed change)</li> <li>• Haultain Street: 50km/h (proposed 30km/h)</li> <li>• Fenton Street: 50km/h (proposed 30km/h)</li> <li>• Brentwood Avenue: 50km/h (proposed 30km/h)</li> <li>• Sylvan Avenue West: 50km/h (proposed 30km/h)</li> <li>• Edenvale Park Road: 50km/h (proposed 30km/h)</li> <li>• Edenvale Crescent: 50km/h (proposed 30km/h)</li> <li>• Punga Street: 50km/h (proposed 30km/h)</li> <li>• View Road: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wynyard Road has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 50km/h as the safe and appropriate speed for Wynyard Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Wyona Place (Otara)

The speed limit on Wyona Place, Otara has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wyona Place connects to Cobham Crescent to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Wyona Place is classified as an Access road under the one network road classification (ONRC). Wyona Place is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one serious crash. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wyona Place were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From MegaMaps tool: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools. Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wyona Place has a mean operating speed in the range of <30km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Cobham Crescent: 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Wyona Place has the following information:

- o Collective Risk band of **Medium**, and a Personal Risk band of **Medium**.
- o The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wyona Place, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Yates Road (Mangere East)

The speed limit on Yates Road, Mangere East has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Yates Road connects to Wickman Way to the north and Massey Road to the south. This road provides access to residential properties and is approximately 0.87km in length.</p> <p>Yates Road is classified as a Primary Collector road under the one network road classification (ONRC). Yates Road is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records fourteen crashes between 2016 and 2020: two minor crashes, twelve non-injury crashes. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Yates Road were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Yates Road has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Wickman Way: 50km/h (proposed 30km/h)</li> <li>Massey Road: 50km/h (no proposed change)</li> <li>Chalfont Street: 50km/h (proposed 30km/h)</li> <li>Royton Avenue: 50km/h (proposed 30km/h)</li> <li>Growers Lane: 50km/h (proposed 30km/h)</li> <li>Ferguson Street: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Yates Road has the following information:

- Collective Risk band of **Low-Medium**, and a Personal Risk band of **Medium**.
- The Infrastructure Risk Rating Score is 2.49. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Yates Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h. Furthermore, while MegaMaps suggests that Yates Road is a Primary Collector Road, that is not its intended function.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Yorkton Rise (Mangere Bridge)

The speed limit on Yorkton Rise, Mangere Bridge has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Yorkton Rise connects to Kiwi Esplanade to the north and Muir Avenue to the south. This road provides access to residential properties and is approximately 0.14km in length.</p> <p>Yorkton Rise is classified as a Access road under the one network road classification (ONRC). Yorkton Rise is a two-way, Two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Yorkton Rise were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Central government policy is to implement 30km/h speed limits adjacent to urban schools.  Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.  A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities"

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Yorkton Rise has a mean operating speed in the range of <30km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Kiwi Esplanade: 50km/h (proposed 30km/h)</li> <li>• Muir Avenue: 50km/h (proposed 30km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From MegaMaps Yorkton Rise has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

#### **Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Yorkton Rise, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Zodiac Street (Henderson)

The speed limit on Zodiac Street, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Zodiac Street connects to Universal Drive to the north and Harrington Road to the south. This road provides access to residential properties and is approximately 0.13km in length.</p> <p>Zodiac Street is classified as an Access road under the one network road classification (ONRC). Zodiac Street is a two-way, two lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injuries (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Zodiac Street were determined using MegaMaps tool.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (0m to &lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> Severe and Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as urban residential using MegaMaps tool. The IRR defines urban residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From MegaMaps tool:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 185 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools.</p> <p>A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Zodiac Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>Universal Drive: 50km/h (no proposed change)</li> <li>Harrington Road: 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From MegaMaps Zodiac Street has the following information:

- o Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- o The Infrastructure Risk Rating Score is 2.44. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 4: Conclusion**

Existing speed limit: 50km/h

*Proposed safe and appropriate speed limit recommendation = 30km/h.*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Zodiac Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – A Renall Road (Pollok)**

The speed limit on A Renall Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>A Renall Road connects to Lees Gully Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 2.14 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of A Renall Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.14
Annual Daily Traffic	31

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.62. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of A Renall Road.

A Renall Road is a self-explaining road as the mean operating speeds (47 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of A Renall Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for A Renall Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (47 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on A Renall Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Aldred Road (Kariotahi)**

The speed limit on Aldred Road, Kariotahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Aldred Road connects to Kohekohe-Karioitahi Road to the east. This road provides access to residential properties.
	This section is approximately 1.05 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Aldred Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 45 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.05
Annual Daily Traffic	45

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Aldred Road.*

Aldred Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Aldred Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Aldred Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Aldred Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Aldred Road is 40 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Allan Road (Awhitu)**

The speed limit on Allan Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Allan Road connects to Opoia Drive to the west and Sergeant Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.34 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Allan Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Opoia Drive:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Sergeant Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.34
Annual Daily Traffic	292

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.09. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Allan Road.*

Allan Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Allan Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Allan Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, moderate road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Allan Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

### **Speed Limit Review – Andrew-Pye Road (Manukau Heads)**

Andrew-Pye Road, Manukau Heads, is divided into two sections as follows: <sup>1</sup>

- Section 1: Andrew-Pye Road between Grahams Beach Road and 1090m south of Grahams Beach Road
- Section 2: Andrew-Pye Road between 1090m south of Grahams Beach Road and southern end of Andrew-Pye Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Andrew-Pye Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Andrew-Pye Road connects to Grahams Beach Road and Big Bay Road to the north. This road provides access to residential properties.	
	This section is approximately 1.09 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.28 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Andrew-Pye Road were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 16 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 16 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Grahams Beach Road:</b> 80-100 km/h (proposed 60 km/h)</li> <li>• <b>Big Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.09	0.28
Annual Daily Traffic	16	16

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Winding	3.50	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Andrew-Pye Road between Grahams Beach Road and 1090m south of Grahams Beach Road
- 60 km/h on Andrew-Pye Road between 1090m south of Grahams Beach Road and southern end of Andrew-Pye Road

Andrew-Pye Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Andrew-Pye Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Andrew-Pye Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (20 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Andrew-Pye Road due to a multitude of factors. These being the unsealed road surface, medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (20 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Andrew-Pye Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Awhitu Central Road (Awhitu)

The speed limit on Awhitu Central Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Awhitu Central Road connects to Tram Gully Road to the east and Kemp Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 4.10 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Awhitu Central Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 136 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 70 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tram Gully Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Kemp Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	4.10
Annual Daily Traffic	136

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Awhitu Central Road.*

Awhitu Central Road is a challenging conversations road as the mean operating speeds (70 km/h) are above the proposed safe and appropriate speeds. Engineering up of Awhitu Central Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Awhitu Central Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Awhitu Central Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Awhitu Gully Road (Manukau Heads)

The speed limit on Awhitu Gully Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Awhitu Gully Road connects to Orua Bay Road to the north. This road provides access to residential properties.
	This section is approximately 1.42 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Awhitu Gully Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as " <i>only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 24 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Wattle Bay Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Dodd Road:</b> 100km/h (proposed 40km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.42
Annual Daily Traffic	24

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote rural	1.00
Intersection density (per km)	<1	1.00
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.21. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Awhitu Gully Road.*

Awhitu Gully Road is a self-explaining road as the mean operating speeds (24 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Awhitu Gully Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Awhitu Gully Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (24 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Awhitu Gully Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Awhitu Gully Road is 40 km/h which is in line with speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (24 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Awhitu Road (Waiuku / Karioitahi / Pollok / Awhitu)

Awhitu Road, Waiuku / Karioitahi / Pollok / Awhitu, is divided into nine sections as follows: <sup>1</sup>

- Section 1: Awhitu Road between King Street and urban traffic area boundary (Waiuku)
- Section 2: Awhitu Road between urban traffic area boundary (Waiuku) and 225m west of Taurangaruru Road
- Section 3: Awhitu Road between 225m west of Taurangaruru Road and Kohekohe-Karioitahi Road
- Section 4: Awhitu Road between Kohekohe-Karioitahi Road and 600m west of Pollok Wharf Road
- Section 5: Awhitu Road between 600m west of Pollok Wharf Road and 150m north of Pollok Wharf Road
- Section 6: Awhitu Road between 150m north of Pollok Wharf Road and Fielding Road
- Section 7: Awhitu Road between Fielding Road and 50m east of Kemp Road
- Section 8: Awhitu Road between 50m east of Kemp Road and 210m northeast of Matakawau Road
- Section 9: Awhitu Road between 210m northeast of Matakawau Road and Tram Gully Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Awhitu Road, Waiuku / Karioitahi / Pollok / Awhitu, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Awhitu Road connects to King Street to the south and Tram Gully Road to the north. This road provides access to residential and commercial properties.		

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments								
	Section 1	Section 2	Section 3						
	<p>This section is approximately 0.375 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.</p>	<p>This section is approximately 0.465 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>	<p>This section is approximately 10.68 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>						
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>	<p>WK NZTA's Crash Analysis System (CAS) records 68 crashes between 2016 and 2020: 2 fatal, 14 serious, 15 minor and 37 non-injury crashes. This resulted in 16 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>						
	Awhitu Road is identified as one of the top 10% DSI saving network sections for New Zealand.								
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Awhitu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <table border="1"> <thead> <tr> <th>Section 1</th> <th>Section 2</th> <th>Section 3</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul> </td> </tr> </tbody> </table>			Section 1	Section 2	Section 3	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>
Section 1	Section 2	Section 3							
<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane</li> </ul>							

Requirement	Comments		
	Section 1	Section 2	Section 3
	(3.0 to 3.5 m) and Very narrow shoulder (<0.5 m) <ul style="list-style-type: none"> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	(3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m) <ul style="list-style-type: none"> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	(3.0 to 3.5 m) and Very narrow shoulder (<0.5 m) <ul style="list-style-type: none"> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4137 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 4137 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 2002 vehicles per day (vpd).

Requirement	Comments		
	Section 1	Section 2	Section 3
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 1.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 4	Section 5	Section 6
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Awhitu Road connects to King Street to the south and Tram Gully Road to the north. This road provides access to residential and commercial properties.		
	This section is approximately 9.44 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.75 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 2.20 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 20 crashes between	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016	WK NZTA's Crash Analysis System (CAS) records 4 crashes between

Requirement	Comments		
	Section 4	Section 5	Section 6
	2016 and 2020: 0 fatal, 2 serious, 6 minor and 12 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	2016 and 2020: 0 fatal, 0 serious, 1 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Awhitu Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Awhitu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional

Requirement	Comments		
	Section 4	Section 5	Section 6
	<i>industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1302 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1226 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1202 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 1.3: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 7	Section 8	Section 9
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		

Requirement	Comments		
	Section 7	Section 8	Section 9
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Awhitu Road connects to King Street to the south and Tram Gully Road to the north. This road provides access to residential and commercial properties.		
	This section is approximately 1.96 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.61 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 4.52 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 6 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 5 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Awhitu Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Awhitu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		

Requirement	Comments		
	Section 7	Section 8	Section 9
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		

Requirement	Comments		
	Section 7	Section 8	Section 9
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1147 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1130 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 136 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Comment
Current speed limit	<p>The existing speed limit(s) on Awhitu Road are as follows:</p> <ul style="list-style-type: none"> <li>60 km/h between King Street and urban traffic area boundary (Waiuku) (Section 1)</li> <li>60 km/h between urban traffic area boundary (Waiuku) and 225m west of Taurangaruru Road (Section 2)</li> <li>100 km/h between 225m west of Taurangaruru Road and Kohekohe-Karioitahi Road (Section 3)</li> <li>100 km/h between Kohekohe-Karioitahi Road and 600m west of Pollok Wharf Road (Section 4)</li> <li>60 km/h between 600m west of Pollok Wharf Road and 150m north of Pollok Wharf Road (Section 5)</li> <li>100 km/h between 150m north of Pollok Warf Road and Fielding Road (Section 6)</li> <li>100 km/h between Fielding Road and Kemp Road (Section 7)</li> <li>60 km/h between Kemp Road and 210m northeast of Matakawau Road (Section 8)</li> <li>100 km/h between 210m northeast of Matakawau Road and Tram Gully Road (Section 9)</li> </ul>

MegaMaps Mean Operating Speed (km/h)	<p>Awhitu Road has a mean operating speed of:</p> <ul style="list-style-type: none"> <li>55km/h between King Street and urban traffic area boundary (Waiuku) (Section 1) from site visit</li> <li>55km/h between urban traffic area boundary (Waiuku) and 225m west of Taurangaruru Road (Section 2) from site visit</li> <li>87 km/h between 225m west of Taurangaruru Road and Kohekohe-Karioitahi Road (Section 3)</li> <li>83 km/h between Kohekohe-Karioitahi Road and 600m west of Pollok Wharf Road (Section 4)</li> <li>72 km/h between 600m west of Pollok Wharf Road and 150m north of Pollok Wharf Road (Section 5)</li> <li>78 km/h between 150m north of Pollok Warf Road and Fielding Road (Section 6)</li> <li>82 km/h between Fielding Road and Kemp Road (Section 7)</li> <li>71 km/h between Kemp Road and 210m northeast of Matakawau Road (Section 8)</li> <li>70 km/h between 210m northeast of Matakawau Road and Tram Gully Road (Section 9)</li> </ul>
Speed limits on adjoining roads	<p>The speed limits in the adjacent road network are:</p> <ul style="list-style-type: none"> <li><b>King Street:</b> 50 km/h</li> <li><b>Taurangaruru Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Kaihau Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Boundary Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Creamery Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Gleeson Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Te Toro Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Cooper Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Ponsford Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>J Renall Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Given Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Cemetery Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Kemp Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> <li><b>Matakawau Road:</b> 60 km/h (proposed SaAS 40 km/h)</li> <li><b>Tram Gully Road:</b> 100 km/h (proposed SaAS 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	2	31
DSI crashes during the period	0	1	16
Corridor Length (km)	0.38	0.47	10.68
Annual Daily Traffic	4137	4137	2002

Required Information for safety metrics calculations	Section 4	Section 5	Section 6
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	8	0	1
DSI crashes during the period	2	0	0
Corridor Length (km)	9.44	0.75	2.20
Annual Daily Traffic	1302	1226	1202
Required Information for safety metrics calculations	Section 7	Section 8	Section 9
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	1	1
DSI crashes during the period	1	0	0
Corridor Length (km)	1.97	0.61	4.52
Annual Daily Traffic	1147	1130	136

- Section 1
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.43. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 28.18. For rural areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.30. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 41.00. For rural areas this corresponds to a Personal Risk band of **High**
- Section 4
  - The Collective Risk score is 0.04. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
  - The Personal Risk score is 8.92. For rural areas this corresponds to a Personal Risk band of **Medium-High**
- Section 5
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 6
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 7
  - The Collective Risk score is 0.10. For rural areas this corresponds to a Collective Risk band of **Medium**
  - The Personal Risk score is 24.68. For rural areas this corresponds to a Personal Risk band of **High**
- Section 8
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 9
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Narrow shoulder	1.45	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Urban residential	3.00	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	2 to <3	1.25	1 to <2	1.15
Access density (per km)	>20	1.30	5 to <10	1.06	2 to <5	1.03
Traffic volume (vpd)	1000 to <6000	1.49	1000 to <6000	1.40	1000 to <6000	1.40
Feature	Section 4		Section 5		Section 6	
	Category	Risk Score	Category	Risk Score	Category	Risk Score

Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	10 to <20	1.10	2 to <5	1.03
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40
Feature	Section 7		Section 8		Section 9	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Narrow shoulder	1.45	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural towns	2.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	<1	1.00
Access density (per km)	2 to <5	1.03	5 to <10	1.06	2 to <5	1.03
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	<1000	1.00

- Section 1

- The Infrastructure Risk Rating Score is 1.98. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.53. For rural areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.83. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 4
  - The Infrastructure Risk Rating Score is 1.77. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 5
  - The Infrastructure Risk Rating Score is 2.20. For rural areas this corresponds to an IRR band of **High**.
- Section 6
  - The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.
- Section 7
  - The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.
- Section 8
  - The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Low-Medium**.
- Section 9
  - The Infrastructure Risk Rating Score is 1.62. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 and Table 2.2 of the Speed Management Guide is

- 50 km/h between King Street and urban traffic area boundary (Waiuku) (Section 1)
- <80km/h between urban traffic area boundary (Waiuku) and Tram Gully Road (Section 2-9)

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Awhitu Road between King Street and urban traffic area boundary (Waiuku) (Section 1)
- 60 km/h on Awhitu Road between urban traffic area boundary (Waiuku) and 225m west of Taurangaruru Road (Section 2)
- 80 km/h on Awhitu Road between 225m west of Taurangaruru Road and Kohekohe-Karioitahi Road (Section 3)
- 80 km/h on Awhitu Road between Kohekohe-Karioitahi Road and 600m west of Pollok Wharf Road (Section 4)
- (Unchanged) 60 km/h on Awhitu Road between 600m west of Pollok Wharf Road and 150m north of Pollok Wharf Road (Section 5)
- 80 km/h on Awhitu Road between 150m north of Pollok Wharf Road and Fielding Road (Section 6)
- 80 km/h on Awhitu Road between Fielding Road and 50m east of Kemp Road (Section 7)
- (Unchanged) 60 km/h on Awhitu Road between 50m east of Kemp Road and 210m northeast of Matakawau Road (Section 8)
- 80 km/h on Awhitu Road between 210m northeast of Matakawau Road and Tram Gully Road (Section 9)

Sections 1-4 of Awhitu Road are challenging conversations roads as the mean operating speeds are higher than the proposed safe and appropriate speeds. Sections 6 and 8 of Awhitu Road are unchanged as the existing speed aligns with the safe and appropriate speeds. Sections 6,7 and 9 of Awhitu Road are self-explaining roads as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Awhitu Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the first section of Awhitu Road due to a multitude of factors. These being the urban residential land use, medium lane width, very narrow shoulder width, straight nature of the road and high road-side hazards. All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

A proposed speed limit of 60 km/h was selected for the second section of Awhitu Road due to a multitude of factors. These being maintaining consistency with surrounding corridors, the medium lane width, narrow shoulder width, straight nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>2</sup>

A proposed speed limit of 80 km/h was selected for the third section of Awhitu Road due to a multitude of factors. These being the mean operating speed (87 km/hr), medium lane width, very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

A proposed speed limit of 80 km/h was selected for the fourth section of Awhitu Road due to a multitude of factors. These being the high mean operating speed (83 km/hr), medium lane width, very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road. Due to adverse crash history on the

road, the collective and personal risk of this road are classified as '**Low-Medium**' and '**Medium-High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

The existing speed limit of 60 km/h is retained for the fifth section of Awhitu Road as it aligns with the recommended safe and appropriate speed.

A proposed speed limit of 80 km/h was selected for the sixth section of Awhitu Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (78 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.

A proposed speed limit of 80 km/h was selected for the seventh section of Awhitu Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (82 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Medium**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

The existing speed limit of 60 km/h is retained for the eighth section of Awhitu Road as it aligns with the recommended safe and appropriate speed.

A proposed speed limit of 80 km/h was selected for the ninth section of Awhitu Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (70 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

Crash history from NZTA's CAS database shows the following:

- Section 1: 1 crash in the last 5 years including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.
- Section 2: 2 crashes in the last 5 years including 0 fatal, 1 serious, 1 minor, and 0 non-injury crashes.
- Section 3: 68 crashes in the last 5 years including 2 fatal, 14 serious, 15 minor, and 37 non-injury crashes.
- Section 4: 20 crashes in the last 5 years including 0 fatal, 2 serious, 6 minor, and 12 non-injury crashes.
- Section 5: No crashes in the last 5 years.
- Section 6: 4 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor, and 3 non-injury crashes.
- Section 7: 2 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor, and 1 non-injury crashes.
- Section 8: 1 crash in the last 5 years including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.
- Section 9: 6 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor, and 5 non-injury crashes.

After considering all of the above factors, the existing speed limits on parts of Awhitu Road in Waiuku, are not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limits for Awhitu Road are:

- 50 km/h for Section 1 which is aligned with the recommended safe and appropriate speed.
- 60 km/h for Section 2 which is aligned with the recommended safe and appropriate speed.
- 80 km/h for Sections 3 and 4 which is higher than the Speed Management Guide recommendation (<80 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (83-87 km/h).
- 60 km/h to be retained for Section 5 as it aligns with the recommended safe and appropriate speed.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

- 80 km/h for Sections 6 and 7 which is higher than the Speed Management Guide recommendation (<80 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (78-82 km/h).
- 60 km/h to be retained for Section 8 as it aligns with the recommended safe and appropriate speed.
- 80 km/h for Section 9 which is higher than the Speed Management Guide recommendation (<80 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (70 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – B. Westhead Road (Pollok)**

The speed limit on B. Westhead Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>B. Westhead Road connects to Kohekohe-Karioitahi Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 0.66 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of B. Westhead Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 72 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.66
Annual Daily Traffic	72

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of B. Westhead Road.*

B. Westhead Road is a self-explaining road as the mean operating speeds (24 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of B. Westhead Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for B. Westhead Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (24 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on B. Westhead Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Barthow Road (Pollok)**

The speed limit on Barthow Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Barthow Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 0.09 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Barthow Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.09
Annual Daily Traffic	4

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.52. For rural areas this corresponds to an IRR band of **Medium**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 80 km/h for the full length of Barthow Road.

Barthow Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Barthow Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Barthow Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Barthow Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Barthow Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the very short length of Barthow Road and the proposed speed of the adjoining road (Awhitu Road 80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Big Bay Road (Manukau Heads)**

Big Bay Road, Manukau Heads, is divided into three sections as follows: <sup>1</sup>

- Section 1: Big Bay Road between Grahams Beach Road and Tearoe Rd
- Section 2: Big Bay Road between Tearoe Road and 550m east of MacKinnon Road
- Section 3: Big Bay Road between 550m east of MacKinnon Road and western end of Big Bay Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Big Bay Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Big Bay Road connects to Grahams Beach Road to the south. This road provides access to residential properties.		
	This section is approximately 0.44 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.74 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.40 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Big Bay Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present,	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present,	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>particularly at certain times of the day, but with few crossing movements."</i>	<i>particularly at certain times of the day, but with few crossing movements."</i>	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 253 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 253 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 253 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 37 km/h.	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Grahams Beach Road:</b> 80-100 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.44	1.74	1.40
Annual Daily Traffic	253	253	253

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Tortuous	6.00	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural towns	2.50

Intersection density (per km)	2 to <3	1.25	2 to <3	1.25	<1	1.00
Access density (per km)	1 to <2	1.01	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.76. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.29. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.21. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80 km/h between Grahams Beach Road and 550m east of MacKinnon Road (Section 1 & 2)
- 50 km/h between 550m east of MacKinnon Road and western end of Big Bay Road (Section 3)

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Big Bay Road between Grahams Beach Road and Tearoe Rd
- 60 km/h on Big Bay Road between Tearoe Road and 550m east of MacKinnon Road
- 40 km/h on Big Bay Road between 550m east of MacKinnon Road and western end of Big Bay Road

Big Bay Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Big Bay Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Big Bay Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (50 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Big Bay Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (37 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

A proposed speed limit of 40 km/h was selected for the third section of Big Bay Road due to a multitude of factors. These being the rural town land use, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (26 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road

After considering all of the above factors, the existing speed limit of 100 km/h on Big Bay Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for section 1 and 2 which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the third section of Big Bay Road is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (50 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (26 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Boiler Gully Road (Manukau Heads)

The speed limit on Boiler Gully Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Boiler Gully Road connects to Manukau Heads Road to the west and Orua Bay Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 3.57 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Boiler Gully Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 81 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Orua Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.57
Annual Daily Traffic	81

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote rural	1.00
Intersection density (per km)	<1	1.00
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.78. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Boiler Gully Road.

Boiler Gully Road is a self-explaining road as the mean operating speeds (52 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Boiler Gully Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Boiler Gully Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (52 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Boiler Gully Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Boundary Road (Pollok)**

Boundary Road, Pollok, is divided into three sections as follows:<sup>1</sup>

- Section 1: Boundary Road between Awhitu Road and eastern end of Boundary Road
- Section 2: Boundary Road between Kohekohe-Karioitahi Road and Awhitu Road
- Section 3: Boundary Road between western end of Boundary Road and Kohekohe-Karioitahi Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Boundary Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Boundary Road connects to Awhitu Road to the east and Kohekohe-Karioitahi Road to the west. This road provides access to residential properties.		
	This section is approximately 0.86 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 3.11 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.49 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is an unsealed. There are no pedestrian or cyclist amenities along this road, and	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Boundary Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 35 km/h.	This section has a mean operating speed of 63 km/h.	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.86	3.11	1.49
Annual Daily Traffic	127	127	52

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Curved	1.80	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.85. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all sections.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Boundary Road between Awhitu Road and eastern end of Boundary Road
- 60 km/h on Boundary Road between Kohekohe-Karioitahi Road and Awhitu Road
- 60 km/h on Boundary Road between western end of Boundary Road and Kohekohe-Karioitahi Road

Boundary Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Boundary Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Boundary Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (35 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Boundary Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (63 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

A proposed speed limit of 60 km/h was selected for the third section of Boundary Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (58 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Boundary Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section of Boundary Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (35 km/h) supports the reduction.

The proposed safe and appropriate speed limit is 60 km/h for sections 2 and 3 which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Brook Road (Awhitu)**

Brook Road, Awhitu, is divided into four sections as follows: <sup>1</sup>

- Section 1: Brook Road between Awhitu Road and Walters Road
- Section 2: Brook Road between Walters Road and 190m west of Featon Avenue
- Section 3: Brook Road between 190m west of Featon Avenue and 110m east of Featon Avenue
- Section 4: Brook Road between 110m east of Featon Avenue and eastern end of Brook Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Brook Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Brook Road connects to Awhitu Road to the west. This road provides access to residential properties.		
	This section is approximately 1.35 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.51 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.30 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Brook Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present,	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present,	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>particularly at certain times of the day, but with few crossing movements."</i>	<i>particularly at certain times of the day, but with few crossing movements."</i>	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 29 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 29 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 29 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 1.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Brook Road connects to Awhitu Road to the west. This road provides access to residential properties.

Requirement	Comments
	<b>Section 4</b>
	This section is approximately 0.26 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Brook Road were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 29 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1.1 and Table 1.2, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Comment
Current speed limit	The existing speed limit(s) on Brook Road are as follows: <ul style="list-style-type: none"> <li>• 100 km/h between Awhitu Road and Walters Road (Section 1)</li> <li>• 100 km/h between Walters Road and 190m west of Featon Avenue (Section 2)</li> <li>• 40 km/h between 190m west of Featon Avenue and 110m east of Featon Avenue (Section 3)</li> <li>• 40 km/h between 110m east of Featon Avenue and eastern end of Brook Road (Section 4)</li> </ul>
MegaMaps Mean Operating Speed (km/h)	McNicol Road has a mean operating speed of: <ul style="list-style-type: none"> <li>• 59 km/h between Awhitu Road and Walters Road (Section 1)</li> <li>• 47 km/h between Walters Road and 190m west of Featon Avenue (Section 2)</li> <li>• 47 km/h between 190m west of Featon Avenue and 110m east of Featon Avenue (Section 3)</li> <li>• 20 km/h between 110m east of Featon Avenue and eastern end of Brook Road (Section 4)</li> </ul>
Speed limits on adjoining roads	The speed limits in the adjacent road network are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed SaAS 80 km/h)</li> <li>• <b>Walters Road:</b> 100 km/h (proposed SaAS 40 km/h)</li> <li>• <b>Featon Avenue:</b> 40 km/h</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.35	0.51	0.30
Annual Daily Traffic	29	29	29
Required Information for safety metrics calculations	Section 4		
Crash Analysis Period (years)	5		
Total injury crashes during period	0		
DSI crashes during the period	0		
Corridor Length (km)	0.26		
Annual Daily Traffic	29		

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 4
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Curved	1.80	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural towns	2.50
Intersection density (per km)	<1	1.00	<1	1.00	2 to <3	1.25
Access density (per km)	2 to <5	1.03	<1	1.00	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00
Feature	Section 4					
	Category	Risk Score				
Road stereotype	Unsealed	10.00				
Road alignment	Winding	3.50				
Carriageway width	Narrow lane, Very narrow shoulder	2.01				
Roadside hazards (in both directions)	High	2.28				
Adjacent land use	Rural towns	2.50				
Intersection density (per km)	<1	1.00				
Access density (per km)	2 to <5	1.03				

Traffic volume (vpd)	<1000	1.00
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- Section 1
  - The Infrastructure Risk Rating Score is 1.42. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.66. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.77. For rural areas this corresponds to an IRR band of **Low-Medium**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.62. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h for section 1 and <80 km/h for section 2.

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h for sections 3 and 4.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Brook Road between Awhitu Road and Walters Road (Section 1)
- 40 km/h on Brook Road between Walters Road and 190m west of Featon Avenue (Section 2)
- (Unchanged) 40 km/h on Brook Road between 190m west of Featon Avenue and 110m east of Featon Avenue (Section 3)
- (Unchanged) 40 km/h on Brook Road between 110m east of Featon Avenue and eastern end of Brook Road (Section 4)

Sections 1, 3 and 4 of Brook Road are self-explaining roads as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Section 2 of Brook Road is a challenging conversations road as the mean operating speed is higher than the proposed safe and appropriate speed. Engineering up of Brook Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Brook Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (59 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

A proposed speed limit of 40 km/h was selected for the second section of Brook Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (47 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on the first and second sections of Brook Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is lower than the recommended safe and appropriate speed 80km/h, because of the very narrow length width, road function, and the low operating speed (59km/h).

The proposed safe and appropriate speed limit for the second section of Brook Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road to maintain consistency with the adjacent sections of the corridor and surrounding corridors.

The existing speed limits of 40 km/h for the third and fourth sections of Brook Road are not changed as they align with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Capes Road (Pollok)

The speed limit on Capes Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Capes Road connects to Given Road and Lees Gully Road to the west. This road provides access to residential properties.
	This section is approximately 1.75 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crash. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Capes Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Given Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.75
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.64. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Capes Road.*

Capes Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Capes Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Capes Road due to a multitude of factors. These being the narrow lane and narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor, and 1 non-injury crash.

After considering all of the above factors, the existing speed limit of 100 km/h on Capes Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cemetery Road (Pollok)

The speed limit on Cemetery Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cemetery Road (Pollok) connects to Awhitu Road to the north and Given Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.3 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crash. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Cemetery Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 110 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 60km/h</li> <li><b>Pollok Wharf Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Given Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	1.3
Annual Daily Traffic	110

- The Collective Risk score is 0.15. For rural areas this corresponds to a Collective Risk band of **Medium-High**

- The Personal Risk score is 384.04. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.02. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Cemetery Road.*

Cemetery Road is a self-explaining road as the mean operating speeds (61 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Cemetery Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Cemetery Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (61 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road. <sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Cemetery Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Clarks Beach Road (Clarks Beach)

Clarks Beach Road, Clarks Beach, is divided into five sections as follows: <sup>1</sup>

- Section 1: Clarks Beach Road between Crispe Road and 100m south of Kaitiaki Drive
- Section 2: Clarks Beach Road between 100m south of Kaitiaki Drive and urban traffic area boundary (Clarks Beach)
- Section 3: Clarks Beach Road between urban traffic area boundary (Clarks Beach) and Farley Road
- Section 4: Clarks Beach Road between Farley Road and Dell Road
- Section 5: Clarks Beach Road between Dell Road and 100m west of Titoki Way

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Clarks Beach Road, Clarks Beach has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Clarks Beach Road connects to Waiau Pa Road to the east and Torkar Road to the west. This road provides access to residential properties.		
	This section is approximately 0.67 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.09 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.12 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 1 fatal, 0 serious, 2 minor and 4 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Clarks Beach Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as	The adjacent land use is classified as	The adjacent land use is classified as

Requirement	Comments		
	Section 1	Section 2	Section 3
	Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."	Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."	Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2282 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2571 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 2571 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation		

Table 1.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 4	Section 5
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Clarks Beach Road connects to Waiau Pa Road to the east and Torkar Road to the west. This road provides access to residential properties.	
	This section is approximately 1.05 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.3 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are no pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Clarks Beach Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Clarks Beach Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> </ul>

Requirement	Comments	
	Section 4	Section 5
	m) and Narrow shoulder (0.5 to 1.0 m) <ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2839 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2839 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation	

In addition to the factors outlined in Tables 1.1 and 1.2, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Comment
Current speed limit	The existing speed limit(s) on Clarks Beach Road are as follows: <ul style="list-style-type: none"> <li>• 50km/h between Crispe Road and 100m south of Kaitiaki Drive (Section 1)</li> <li>• 80km/h between 100m south of Kaitiaki Drive and urban traffic area boundary (Clarks Beach) (Section 2)</li> <li>• 80km/h between urban traffic area boundary (Clarks Beach) and Farley Road (Section 3)</li> <li>• 80km/h between Farley Road and Dell Road (Section 4)</li> <li>• 80km/h between Dell Road and 100m west of Titoki Way (Section 5)</li> </ul>
MegaMaps Mean Operating Speed (km/h)	Clarks Beach Road has a mean operating speed of: <ul style="list-style-type: none"> <li>• 48 km/h between Crispe Road and 100m south of Kaitiaki Drive (Section 1)</li> <li>• 78 km/h between 100m south of Kaitiaki Drive and urban traffic area boundary (Clarks Beach) (Section 2)</li> <li>• 78 km/h between urban traffic area boundary (Clarks Beach) and Farley Road (Section 3)</li> <li>• 83 km/h between Farley Road and Dell Road (Section 4)</li> <li>• 83 km/h between Dell Road and 100m west of Titoki Way (Section 5)</li> </ul>
Speed limits on adjoining roads	The speed limits in the adjacent road network are: <ul style="list-style-type: none"> <li>• <b>McKenzie Road:</b> 50 km/h</li> <li>• <b>Waiau Pa Road:</b> 80 km/h</li> <li>• <b>Torkar Road:</b> 50 km/h</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	1	3
DSI crashes during the period	0	0	1
Corridor Length (km)	0.67	1.09	1.12
Annual Daily Traffic	2282	2571	2571
Required Information for safety metrics calculations	Section 4	Section 5	
Crash Analysis Period (years)	5	5	

Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.05	0.3
Annual Daily Traffic	2839	2839

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.18. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 19.08. For rural areas this corresponds to a Personal Risk band of **High**
- Section 4
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 5
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Winding	3.5	Curved	1.8	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Urban residential	3	Urban residential	3	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6	<1	1	<1	1
Access density (per km)	>20	1.3	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	1000 to <6000	1.4	1000 to <6000	1.4	1000 to <6000	1.4
Feature	Section 4		Section 5			
	Category	Risk Score	Category	Risk Score		
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7		
Road alignment	Curved	1.8	Curved	1.8		
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45		
Roadside hazards (in both directions)	High	2.28	High	2.28		
Adjacent land use	Rural residential	1.5	Urban residential	3		
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15		
Access density (per km)	10 to <20	1.1	<1	1		

Traffic volume (vpd)	1000 to <6000	1.4	1000 to <6000	1.4
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- Section 1
  - The Infrastructure Risk Rating Score is 2.88. For urban areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.08. For urban areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.78. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 4
  - The Infrastructure Risk Rating Score is 1.80. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 5
  - The Infrastructure Risk Rating Score is 2.03. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40 km/h between Crispe Road and 100m south of Kaitiaki Drive (Section 1)
- 50 km/h between 100m south of Kaitiaki Drive and urban traffic area boundary (Clarks Beach) (Section 2)
- 50 km/h between Dell Road and 100m west of Titoki Way (Section 5)

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80km/h between urban traffic area boundary (Clarks Beach) and Farley Road (Section 3)
- <80km/h between Farley Road and Dell Road (Section 4)

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- (Unchanged) 50 km/h on Clarks Beach Road between Crispe Road and 100m south of Kaitiaki Drive (Section 1)
- 50 km/h on Clarks Beach Road between 100m south of Kaitiaki Drive and urban traffic area boundary (Clarks Beach) (Section 2)
- (Unchanged) 80 km/h on Clarks Beach Road between urban traffic area boundary (Clarks Beach) and Farley Road (Section 3)
- (Unchanged) 80 km/h on Clarks Beach Road between Farley Road and Dell Road (Section 4)
- 50 km/h on Clarks Beach Road between Dell Road and 100m west of Titoki Way (Section 5)

Clarks Beach Road is a challenging conversations road as the mean operating speeds are above the proposed safe and appropriate speeds. Engineering up of Clarks Beach Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed of 50 km/h is unchanged for the first section of Clarks Beach Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (48 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.<sup>2</sup> It is proposed to move the current 80/50 speed limit change point to the urban traffic boundary (Clarks Beach) to better align with the future development of residential land use along this section of Clarks Beach Road.

A proposed speed limit of 50 km/h was selected for the second section of Clarks Beach Road due to a multitude of factors. These being the future residential development, medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and mean operating speed (78 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years for the second section including 0 fatal, 0 serious, 1 minor, and 2 non-injury crashes.

The existing speed of 80km/h is unchanged for the third section of Clarks Beach Road due to a multitude of factors. The 80km/h was changed on 30 June 2020 by Auckland Transport. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and mean operating speed (78 km/h). Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Medium-High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

Crash history from NZTA's CAS database shows 7 crashes in the last 5 years for the third section including 1 fatal, 0 serious, 2 minor, and 4 non-injury crashes.

The existing speed of 80km/h is unchanged for the fourth section of Clarks Beach Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, curved nature of the road, high road-side hazards and mean operating speed (83 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

A proposed speed limit of 50 km/h was selected for the fifth section of Clarks Beach Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, curved nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road. It is proposed to move the current 80/50 speed limit change point further west to Dell Road to better align with the future development of residential land use along this section of Clarks Beach Road.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the fifth section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crash.

After considering all of the above factors, the existing speed limits on Clarks Beach Road in Clarks Beach is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section of Clarks Beach Road is 50 km/h which is higher than the speed limit recommended by the Speed Management Guide (40 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (48 km/h) supports the existing speed limit.

The proposed safe and appropriate speed limit is 50 km/h for the second and fifth sections which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for the third and fourth sections of Clarks Beach Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (78-83 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Cochrane Road (Pollok)**

The speed limit on Cochrane Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cochrane Road connects to Awhitu Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.61 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Cochrane Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.61
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.48. For rural areas this corresponds to an IRR band of **Medium**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Cochrane Road.

Cochrane Road is a self-explaining road as the mean operating speeds (26 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Cochrane Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Cochrane Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (26 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a medium risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Cochrane Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Cochrane Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (26 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

### Speed Limit Review – Colbeck Road (Awhitu)

The speed limit on Colbeck Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Colbeck Road connects to Awhitu Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.51 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Colbeck Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.51
Annual Daily Traffic	83

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.28. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Colbeck Road.

Colbeck Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Colbeck Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Colbeck Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (37 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Colbeck Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is lower than the recommended safe and appropriate speed (80km/h) because of the very narrow road width, road function, and low operation speed (37km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Constable Road (Waiuku)**

The speed limit on Constable Road, between urban traffic area boundary (Waiuku) and Karioitahi Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Constable Road connects to King Street to the east and Karioitahi Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.07 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian amenities or on-street parking along this section. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Constable Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Constable Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There

Requirement	Comments
	<i>may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5,133 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 76 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>King Street:</b> 50 km/h</li> <li>• <b>Karioitahi Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.07
Annual Daily Traffic	5,133

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	1000 to <6000	1.40

The Infrastructure Risk Rating Score is 1.62. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 80 km/h for Constable Road, between urban traffic area boundary (Waiuku) and Karioitahi Road*

Constable Road is a self-explaining road as the mean operating speeds (76 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Constable Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Constable Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (76 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Constable Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Constable Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (76 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Cooper Road (Pollok)**

The speed limit on Cooper Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cooper Road connects to Awhitu Road to the west and Te Toro Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 2.99 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crash. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Cooper Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Te Toro Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	2.99
Annual Daily Traffic	41

- The Collective Risk score is 0.067. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
- The Personal Risk score is 447.02. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Cooper Road.

Cooper Road is a self-explaining road as the mean operating speeds (55 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Cooper Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Cooper Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (55 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'Low-Medium' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor, and 1 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Cooper Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Coronation Road (Pollok)**

The speed limit on Coronation Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coronation Road connects to Kohekohe-Karioitahi Road to the south and Creamery Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 0.87 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Coronation Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 15 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Creamery Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.87
Annual Daily Traffic	15

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.58. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Coronation Road.*

Coronation Road is a self-explaining road as the mean operating speeds (22 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Coronation Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Coronation Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (22 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road. <sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Coronation Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Coronation Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (22 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Craig Road (Pollok)

Craig Road, Pollok, is divided into two sections as follows: <sup>1</sup>

- Section 1: Craig Road between Awhitu Road and Keogh Road
- Section 2: Craig Road between Keogh Road and western end of Craig Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Craig Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Craig Road connects to Awhitu Road to the east. This road provides access to residential properties.	
	This section is approximately 2.04 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.26 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is an unsealed undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Craig Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 33 km/h.	No mean speed available in Megamaps.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	2.04	0.26
Annual Daily Traffic	208	20

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Curved	1.80	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.91. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Craig Road.*

Craig Road is a self-explaining road as the mean operating speeds (33 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Craig Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Craig Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (33 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Craig Road due to the short length of the section. These being the unsealed road surface, narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Craig Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Creamery Road (Pollok)**

Creamery Road, Pollok, is divided into two sections as follows: <sup>1</sup>

- Section 1: Creamery Road between Awhitu Rd and Keogh Road
- Section 2: Creamery Road between Keogh Road and Kelland Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Creamery Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Creamery Road connects to Awhitu Road to the east and Kelland Road to the west. This road provides access to residential properties.	
	This section is approximately 1.56 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.71 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Creamery Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 374 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 57 km/h.	This section has a mean operating speed of 51 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Kelland Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.56	0.71
Annual Daily Traffic	374	104

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	5 to <10	1.06	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.75. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 60 km/h for the first section and 80 km/h for the second section.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Creamery Road between Awhitu Rd and Keogh Road
- 60 km/h on Creamery Road between Keogh Road and Kelland Road

Creamery Road is a self-explaining road as the mean operating speeds (57 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Creamery Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Creamery Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (57 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Creamery Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (51 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a medium risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Creamery Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the second section of Creamery Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (51 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dickey Road (Manukau Heads)

The speed limit on Dickey Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dickey Road connects to Manukau Heads Road to the east. This road provides access to residential properties.
	This section is approximately 0.86 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dickey Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.86
Annual Daily Traffic	8

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.30. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Dickey Road.*

Dickey Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Dickey Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Dickey Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, moderate road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Dickey Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Dickey Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dodd Road (Manukau Heads)

The speed limit on Dodd Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dodd Road connects to Wattle Bay Road to the south. This road provides access to residential properties.
	This section is approximately 0.23 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dodd Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Wattle Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.23
Annual Daily Traffic	50

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.48. For rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Dodd Road.*

Dodd Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Dodd Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Dodd Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Dodd Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Dodd Road is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Dominkovich Road (Pollok)

The speed limit on Dominkovich Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dominkovich Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 0.89 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dominkovich Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 19 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.89
Annual Daily Traffic	19

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.45. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Dominkovich Road.*

Dominkovich Road is a self-explaining road as the mean operating speeds (23 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Dominkovich Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Dominkovich Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (23 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Dominkovich Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Dominkovich Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (23 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Douglas Road (Pollok)

The speed limit on Douglas Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Douglas Road connects to Awhitu Road to the north. This road provides access to residential properties.
	This section is approximately 1.1 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Douglas Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 72 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.1
Annual Daily Traffic	72

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Douglas Road.*

Douglas Road is a self-explaining road as the mean operating speeds (42 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Douglas Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Douglas Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Douglas Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Duncan Road (Awhitu)

The speed limit on Duncan Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Duncan Road connects to Matakawau Road to the north. This road provides access to residential properties.
	This section is approximately 0.12 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Duncan Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Matakawau Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.12
Annual Daily Traffic	292

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.7
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.6. For rural areas this corresponds to an IRR band of **Low**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Duncan Road.*

Duncan Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Duncan Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Duncan Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Low' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Duncan Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Fielding Road (Awhitu)

The speed limit on Fielding Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Fielding Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 0.29 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Fielding Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 39 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.29
Annual Daily Traffic	31

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.29. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 80 km/h for the full length of Fielding Road.*

Fielding Road is a self-explaining road as the mean operating speeds (39 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Fielding Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Fielding Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (39 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Fielding Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Fielding Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80km/h) but is considered appropriate when considering the short length of the road, and the proposed speed of the adjoining road (Awhitu Road 80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Fisher Road (Kariotahi)

The speed limit on Fisher Road, Kariotahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fisher Road connects to Kohekohe-Kariotahi Road to the west and Gazelle Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 1.05 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Fisher Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 49 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 41 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Kohekohe-Kariotahi Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Gazelle Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.05
Annual Daily Traffic	49

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote rural	1.00
Intersection density (per km)	2 to <3	1.25
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.31. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/ h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Fisher Road.*

Fisher Road is a self-explaining road as the mean operating speeds (41 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Fisher Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Fisher Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (41 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road. <sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Fisher Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Fisher Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/ h), this is considered appropriate based on the function of the road and the mean operating speed (41 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Furniss Road (Pollok)

The speed limit on Furniss Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Furniss Road connects to Waipipi Wharf Road to the north. This road provides access to residential properties.
	This section is approximately 1.03 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Furniss Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 39 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Waipipi Wharf Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.03
Annual Daily Traffic	39

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.18. For rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Furniss Road.*

Furniss Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Furniss Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Furniss Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road. <sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Furniss Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Furniss Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – G Irwin Road (Manukau Heads)

The speed limit on G Irwin Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	G Irwin Road connects to Manukau Heads Road to the east. This road provides access to residential properties.
	This section is approximately 0.73 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of G Irwin Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 21 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.73
Annual Daily Traffic	9

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.07. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of G Irwin Road.*

G Irwin Road is a self-explaining road as the mean operating speeds (21 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of G Irwin Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for G Irwin Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, moderate road-side hazards and low mean operating speed (21 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on G Irwin Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for G Irwin Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (21 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Gap Road (Manukau Heads)

The speed limit on Gap Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Gap Road connects to Wattle Bay Road to the south. This road provides access to residential properties.
	This section is approximately 0.25 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is on-street parking along this section. There are no pedestrian amenities or cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Gap Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 21 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Wattle Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.25
Annual Daily Traffic	50

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.95. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Gap Road.*

Gap Road is a self-explaining road as the mean operating speeds (21 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Gap Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Gap Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (21 km/h). All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Gap Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Gazelle Road (Kariotahi)

Gazelle Road, Kariotahi, is divided into two sections as follows:<sup>1</sup>

- Section 1: Gazelle Road between Kaihau Road and 300m southwest of Kaihau Road
- Section 2: Gazelle Road between 300m southwest of Kaihau Road and Fisher Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Gazelle Road, Kariotahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Gazelle Road connects to Kaihau Road to the north and Fisher Road to the south. This road provides access to residential properties.	
	This section is approximately 0.27 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.72 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is an unsealed, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Gazelle Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kaihau Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Fisher Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.27	0.72
Annual Daily Traffic	25	25

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Curved	1.8	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.69. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Gazelle Road between Kaihau Road and 300m southwest of Kaihau Road
- 40 km/h on Gazelle Road between 300m southwest of Kaihau Road and Fisher Road

Gazelle Road is a self-explaining road as the mean operating speeds (27 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Gazelle Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Gazelle Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (27 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 40 km/h was selected for the second section of Gazelle Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (34 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Gazelle Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the second section of Gazelle Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h);, this is considered appropriate based on the function of the road and the mean operating speed (34 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Given Road (Pollok)**

Given Road, Pollok, is divided into two sections as follows: <sup>1</sup>

- Section 1: Given Road between Awhitu Road and Cemetery Road
- Section 2: Given Road between Cemetery Road and Lees Gully Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Given Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Given Road connects to Awhitu Road to the west and Lees Gully Road to the east. This road provides access to residential properties.	
	This section is approximately 1.67 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.36 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Given Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 93 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 93 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.67	1.36
Annual Daily Traffic	93	93

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Severe	2.78
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.06. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.11. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Given Road between Awhitu Road and Cemetery Road
- 60 km/h on Given Road between Cemetery Road and Lees Gully Road

Given Road is a self-explaining road as the mean operating speeds (47 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Given Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Given Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (47 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Given Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (47 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Given Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Gleeson Road (Pollok)

The speed limit on Gleeson Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gleeson Road connects to Kohekohe-Karioitahi Road to the west and Awhitu Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 3.94 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Gleeson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 230 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 49 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.94
Annual Daily Traffic	230

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.69. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Gleeson Road.*

Gleeson Road is a self-explaining road as the mean operating speeds (49 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Gleeson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Gleeson Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (49 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Gleeson Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Gordon Road (Pollok)

The speed limit on Gordon Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Gordon Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 2.29 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Gordon Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.29
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Gordon Road.*

Gordon Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Gordon Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Gordon Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (37 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Gordon Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Grahams Beach Road (Manukau Heads)

Grahams Beach Road, Manukau Heads, is divided into three sections as follows:<sup>1</sup>

- Section 1: Grahams Beach Road between Tram Gully Road and Andrew Pye Road
- Section 2: Grahams Beach Road between Andrew Pye Road and 290m west of Greenock Drive
- Section 3: Grahams Beach Road between 290m west of Greenock Drive end the eastern end of Grahams Beach Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Grahams Beach Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Grahams Beach Road connects to Tram Gully Road to the west and Greenock Drive to the east. This road provides access to residential properties.		
	This section is approximately 3.71 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.03 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.58 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.	street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Grahams Beach Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 384 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 121 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 121 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.	This section has a mean operating speed of 62 km/h.	This section has a mean operating speed of 45 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Tram Gully Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Greenock Drive:</b> 50 km/h (proposed 40 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	3.71	1.03	0.58
Annual Daily Traffic	384	121	121

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.93. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for sections 1 and 2.

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h for section 3.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Grahams Beach Road between Tram Gully Road and Andrew Pye Road
- 60 km/h on Grahams Beach Road between Andrew Pye Road and 290m west of Greenock Drive
- 40 km/h on Grahams Beach Road between 290m west of Greenock Drive and the eastern end of Grahams Beach Road

Grahams Beach Road is a self-explaining road as the mean operating speeds are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Grahams Beach Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first and second sections of Grahams Beach Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (61-62 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 40 km/h was selected for Grahams Beach Road due to a multitude of factors. These being the urban land use, medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (45 km/hr). All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

After considering all of the above factors, the existing speed limits of 100, 80 and 50 km/h on Grahams Beach Road in Manukau Heads, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first and second sections of Grahams Beach Road which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit is 40 km/h for the third section which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Greenfield Road (Pollok)

The speed limit on Greenfield Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Greenfield Road connects to Te Toro Road to the west. This road provides access to residential properties.
	This section is approximately 0.27 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Greenfield Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Te Toro Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.27
Annual Daily Traffic	41

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Narrow shoulder	1.45
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.92. For rural areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Greenfield Road.*

Greenfield Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Greenfield Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Greenfield Road due to a multitude of factors. These being the medium lane and narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/hr). All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Greenfield Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Greenock Drive (Manukau Heads)

The speed limit on Greenock Drive, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Greenock Drive connects to Grahams Beach Road to the north. This road provides access to residential properties.
	This section is approximately 0.45 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Greenock Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 10 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 36 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Grahams Beach Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.45
Annual Daily Traffic	10

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.75. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Greenock Drive.*

Greenock Drive is a self-explaining road as the mean operating speeds (36 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Greenock Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Greenock Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (36 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 50 km/h on Greenock Drive in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Greenock Drive is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (36 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hamilton Road (Awhitu)

Hamilton Road, Awhitu, is divided into three sections as follows: <sup>1</sup>

- Section 1: Hamilton Road between Manukau Heads Road and 2255m south of Manukau Heads Road
- Section 2: Hamilton Road between 2255m south of Manukau Heads Road and 3320m south of Manukau Heads Road
- Section 2: Hamilton Road between 3320m south of Manukau Heads Road and southern end of Hamilton Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hamilton Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Hamilton Road connects to Manukau Heads Road to the north. This road provides access to residential properties.		
	This section is approximately 2.26 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.06 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.24 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is an unsealed road. There are no pedestrian or cyclist amenities along this	This This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities along this road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hamilton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may</i>	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may</i>	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may</i>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 64 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 64 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 64 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.	This section has a mean operating speed of 37 km/h.	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	2.26	1.06	0.24
Annual Daily Traffic	64	64	64

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10	Two-lane undivided	3.70
Road alignment	Tortuous	6.00	Tortuous	6.00	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	5 to <10	1.06	>20	1.30
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.29. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.64. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.30. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all three sections.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Hamilton Road between Manukau Heads Road and 2255m south of Manukau Heads Road (Section 1)
- 60 km/h on Hamilton Road between 2255m south of Manukau Heads Road and 3320m south of Manukau Heads Road (Section 2)
- 60 km/h on Hamilton Road between 3320m south of Manukau Heads Road and southern end of Hamilton Road (Section 3)

Hamilton Road is a self-explaining road as the mean operating speeds (37 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hamilton Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first and third section of Hamilton Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, high-severe road-side hazards and low mean operating speed (37 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

Although an unsealed road, a proposed speed limit of 60 km/h was also selected for the second section of Hamilton Road, due to the second section being too short for a speed change between sections 1 and 3 which have proposed speeds of 60 km/h.

After considering all of the above factors, the existing speed limit of 100 km/h on Hamilton Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hamlin Road (Pollok)

The speed limit on Hamlin Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hamlin Road connects to J Renall Road to the west and Lees Gully Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.23 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Hamlin Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 14 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 49 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>J Renall Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.23
Annual Daily Traffic	14

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Hamlin Road.*

Hamlin Road is a self-explaining road as the mean operating speeds (49 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hamlin Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Hamlin Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (49 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Hamlin Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hartner Road (Manukau Heads)

Hartner Road, Manukau Heads, is divided into two sections as follows: <sup>1</sup>

- Section 1: Hartner Road between 430m east of Manukau Heads Road to eastern end of Hartner Road
- Section 2: Hartner Road between Manukau Heads Road to 430m east of Manukau Heads Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hartner Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Hartner Road connects to Manukau Heads Road to the south. This road provides access to residential properties.	
	This section is approximately 0.71 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.43 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is an unsealed, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hartner Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as " <i>only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as " <i>only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 21 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 21 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22 km/h.	This section has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Manukau Heads Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.71	0.43
Annual Daily Traffic	21	21

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Two-lane undivided	3.70
Road alignment	Winding	3.50	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Moderate	1.43
Adjacent land use	Remote rural	1.00	Remote rural	1.00
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	1 to <2	1.01	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.21. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.29. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for the first section.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h for the second section.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Hartner Road between 430m east of Manukau Heads Road to eastern end of Hartner Road
- 40 km/h on Hartner Road between Manukau Heads Road to 430m east of Manukau Heads Road

Hartner Road is a self-explaining road as the mean operating speeds (22 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hartner Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Hartner Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (22 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 40 km/h was selected for the second section of Hartner Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (22 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Hartner Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section of Hartner Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (22 km/h) supports the reduction.

The recommended safe and appropriate speed limit for the second section of Hartner Road is 40 km/h which is lower than the Speed Management Guide recommendation (80 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is likely to be credible and supported by the public due to the existing operating speeds (22 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Harvey Road (Waiuku)

The speed limit on Harvey Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Harvey Road connects to Constable Road to the east and Park Road to the west. This road provides access to residential properties.
	This section is approximately 1.02 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Harvey Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 57 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Constable Road: 100 km/h (proposed 80 km/h)</li> <li>• Park Road: 100 km/h (proposed 60 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.02
Annual Daily Traffic	260

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.

#### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Harvey Road.

Harvey Road is a self-explaining road as the mean operating speeds (57 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Harvey Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Harvey Road due to a multitude of factors, these being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (57 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Harvey Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Hatton Road (Awhitu)**

The speed limit on Hatton Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hatton Road connects to Awhitu Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 3.36 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Hatton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 114 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.36
Annual Daily Traffic	114

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Hatton Road.*

Hatton Road is a self-explaining road as the mean operating speeds (34 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hatton Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Hatton Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (34 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Hatton Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Hudson Road (Manukau Heads)**

Hudson Road, Manukau Heads, is divided into two sections as follows: <sup>1</sup>

- Section 1: Hudson Road between Big Bay Road and 160m west of Seaview Terrace
- Section 2: Hudson Road between 160m west of Seaview Terrace and Logan Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hudson Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Hudson Road connects to Big Bay Road to the west and Logan Drive to the east. This road provides access to residential properties.	
	This section is approximately 0.93 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.27 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hudson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Big Bay Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Logan Drive:</b> 50 km/h (proposed 40 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.93	0.27
Annual Daily Traffic	100	100

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Urban residential	3.00
Intersection density (per km)	<1	1.00	5 to <10	2.60
Access density (per km)	2 to <5	1.03	>20	1.30
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.37. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.44. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h for the first section.

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h for the second section.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Hudson Road between Big Bay Road and 160m west of Seaview Terrace
- 40 km/h on Hudson Road between 160m west of Seaview Terrace and Logan Drive

Hudson Road is a self-explaining road as the mean operating speeds (34 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hudson Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Hudson Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (34 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

A proposed speed limit of 40 km/h was selected for the second section of Hudson Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (34 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Hudson Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section of Hudson Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (34 km/h) supports the reduction.

The proposed safe and appropriate speed limit is 40 km/h for the second section which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hull Road (Waiuku)

The speed limit on Hull Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Hull Road connects to Towers Road to the west. This road provides access to residential properties.
	This section is approximately 0.40 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hull Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 605 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Towers Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.40
Annual Daily Traffic	605

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.76. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 80 km/h for the full length of Hull Road.*

Hull Road is a self-explaining road as the mean operating speeds (60 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hull Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Hull Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (60 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Hull Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Hull Road is 80 km/h which is higher than the Speed Management Guide recommendation (>80km/h) but are considered appropriate when considering proposed speeds on adjoining roads and the nature and function of the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – J Hull Road (Manukau Heads)

The speed limit on J Hull Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>J Hull Road connects to Manukau Heads Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.48 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of J Hull Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 25 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.48
Annual Daily Traffic	8

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1.00
Intersection density (per km)	2 to <3	1.25
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.82. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of J Hull Road.*

J Hull Road is a self-explaining road as the mean operating speeds (25 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of J Hull Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for J Hull Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (25 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on J Hull Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for J Hull Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (25 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – J Irwin Road (Awhitu)

The speed limit on J Irwin Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	J Irwin Road connects to Manukau Heads Road to the east. This road provides access to residential properties.
	This section is approximately 0.41 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of J Irwin Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 17 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Manukau Heads Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.41
Annual Daily Traffic	17

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1.00
Intersection density (per km)	2 to <3	1.25
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.82. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of J Irwin Road.*

J Irwin Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of J Irwin Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for J Irwin Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on J Irwin Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for J Irwin Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – J Renall Road (Pollok)

The speed limit on J Renall Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>J Renall Road connects to Awhitu Road to the west and Lees Gully Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 4.87 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of J Renall Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 51 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 43 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li><b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	4.87
Annual Daily Traffic	51

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of J Renall Road.*

J Renall Road is a self-explaining road as the mean operating speeds (43 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of J Renall Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for J Renall Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (43 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road. <sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on J Renall Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kaihau Road (Kariotahi)

The speed limit on Kaihau Road, Kariotahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kaihau Road connects to Kohekohe-Karioitahi Road to the west and Awhitu Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 3.83 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kaihau Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 166 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	0
Corridor Length (km)	3.83
Annual Daily Traffic	166

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kaihau Road.*

Kaihau Road is a self-explaining road as the mean operating speeds (61 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kaihau Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kaihau Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (61 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road. <sup>1</sup>

Crash history from NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Kaihau Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Karioitahi Road (Waiuku / Karioitahi)

Karioitahi Road, Waiuku, is divided into three sections as follows:<sup>1</sup>

- Section 1: Karioitahi Road between urban traffic area boundary (Waiuku) and Constable Road
- Section 2: Karioitahi Road between Constable Road and 1880m west of Kohekohe-Karioitahi Road
- Section 3: Karioitahi Road between 1880m west of Kohekohe-Karioitahi Road and western end of Karioitahi Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Karioitahi Road, Waiuku / Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Karioitahi Road connects to the urban traffic area boundary (Karioitahi Road) and Constable Road to the east. This road provides access to residential properties.		
	This section is approximately 1.13 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 5.36 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.64 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no	This section is a two-way, two-lane, undivided road. There are no	This section is a two-way, two-lane, undivided road. There are no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 14 crashes between 2016 and 2020: 0 fatal, 0 serious, 5 minor and 9 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
	Karioitahi Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Karioitahi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site	The adjacent land use is classified as Rural residential using on-site	The adjacent land use is classified as Remote rural using on-site information

Requirement	Comments		
	Section 1	Section 2	Section 3
	information and geomaps. The IRR defines Rural Residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 450 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1223 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1223 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.	This section has a mean operating speed of 65 km/h.	This section has a mean operating speed of 49 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Urban traffic area boundary (Karioitahi Road, Waiuku):</b> 50 km/h</li> <li><b>Constable Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	5	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.13	5.36	0.64
Annual Daily Traffic	450	1223	1223

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Curved	1.80	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	<1	1.00
Access density (per km)	10 to <20	1.10	5 to <10	1.06	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.81. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- 80 km/h between urban traffic area boundary (Waiuku) and Constable Road (Section 1)
- <80km/h between Constable Road and 1880m west of Kohekohe-Karioitahi Road (Section 2)
- <80 km/h between 1880m west of Kohekohe-Karioitahi Road and western end of Karioitahi Road (Section 3)

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 80 km/h on Karioitahi Road between urban traffic area boundary (Waiuku) and Constable Road (Section 1)
- 80 km/h on Karioitahi Road between Constable Road and 1880m west of Kohekohe-Karioitahi Road (Section 2)
- 60 km/h on Karioitahi Road between 1880m west of Kohekohe-Karioitahi Road and western end of Karioitahi Road (Section 3)

Karioitahi Road is a self-explaining road as the mean operating speeds (49-65 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Karioitahi Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for the first section of Karioitahi Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.

A proposed speed limit of 80 km/h was selected for Karioitahi Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, high road-side hazards and the long straight sections of the road. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 14 crashes in the last 5 years for the second section including 0 fatal, 0 serious, 5 minor, and 9 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the third section Karioitahi Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, High road-side hazards and low mean operating speed (49 km/hr). All of these factors contribute to the road's 'Medium-high' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Karioitahi Road in Waiuku / Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section is 80 km/h which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for the second section of Karioitahi Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (65 km/h).

The proposed safe and appropriate speed limit for the third section of Karioitahi Road is 60 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (49 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kauri Road (Awhitu)

The speed limit on Kauri Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Kauri Road connects to Colbeck Road to the west. This road provides access to residential properties.
	This section is approximately 1.61 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kauri Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Colbeck Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.61
Annual Daily Traffic	41

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kauri Road.*

Kauri Road is a self-explaining road as the mean operating speeds (34 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kauri Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kauri Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (34 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Kauri Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kelland Road (Pollok)

Kelland Road, Pollok, is divided into two sections as follows: <sup>1</sup>

- Section 1: Kelland Road between Creamery Road and Kohekohe-Kariotahi Road
- Section 2: Kelland Road between Kohekohe-Kariotahi Road and western end of Kelland Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Kelland Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Kelland Road connects to Creamery Road to the east. This road provides access to residential properties.	
	This section is approximately 1.36 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.78 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kelland Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 26 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 26 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45 km/h.	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Creamery Road: 100 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	1
Corridor Length (km)	1.36	0.78
Annual Daily Traffic	26	26

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.26. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 2695.00. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Tortuous	6.00	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.26. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.19. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Kelland Road between Creamery Road and Kohekohe-Kariotahi Road
- 40 km/h on Kelland Road between Kohekohe-Kariotahi Road and western end of Kelland Road

Kelland Road is a self-explaining road as the mean operating speeds (42-45 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kelland Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kelland Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (45 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 40 km/h was selected for Kelland Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'High' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Kelland Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for Kelland Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kemp Road (Awhitu)

The speed limit on Kemp Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kemp Road connects to Awhitu Road to the south and Awhitu Central Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 4.32 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records <b>5</b> crashes between 2016 and 2020: 1 fatal, 0 serious, 0 minor and 4 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kemp Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Awhitu Central Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	4.32
Annual Daily Traffic	208

- The Collective Risk score is 0.05. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
- The Personal Risk score is 61.30. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.20. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kemp Road.

Kemp Road is a self-explaining road as the mean operating speeds (55 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kemp Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kemp Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (55 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Low-Medium**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 5 crashes in the last 5 years including 1 fatal, 0 serious, 0 minor, and 4 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Kemp Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Keogh Road (Pollok)

The speed limit on Keogh Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Keogh Road connects to Craig Road to the north and Creamery Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.13 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Keogh Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Craig Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Creamery Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.13
Annual Daily Traffic	62

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.04. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Keogh Road.*

Keogh Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Keogh Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Keogh Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (37 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Keogh Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Kohekohe-Karioitahi Road (Karioitahi / Pollok)**

Kohekohe-Karioitahi Road, Pollok, is divided into three sections as follows:<sup>1</sup>

- Section 1: Kohekohe-Karioitahi Road between Awhitu Road and Coronation Road
- Section 2: Kohekohe-Karioitahi Road between Coronation Road and Boundary Road (West)
- Section 3: Kohekohe-Karioitahi Road between Boundary Road (West) and Karioitahi Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Kohekohe-Karioitahi Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Kohekohe-Karioitahi Road connects to Awhitu Road to the north and Karioitahi Road to the south. This road provides access to residential properties.		
	This section is approximately 5.46 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.20 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 5.69 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no	This section is a two-way, two-lane, undivided road. There are no	This section is a two-way, two-lane, undivided road. There are no

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 2 serious, 2 minor and 0 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kohekohe-Karioitahi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural

Requirement	Comments		
	Section 1	Section 2	Section 3
	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 75 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 75 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 75 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.	This section has a mean operating speed of 57 km/h.	This section has a mean operating speed of 53 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Karioitahi Road:</b> 100 km/h (proposed 60-80 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	1	4
DSI crashes during the period	0	0	2
Corridor Length (km)	5.46	1.20	5.69
Annual Daily Traffic	75	75	75

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.07. For rural areas this corresponds to a Collective Risk band of **Medium**
  - The Personal Risk score is 256.9. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.5	Winding	3.5	Winding	3.5
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.5	Rural Residential	1.5	Rural Residential	1.5
Intersection density (per km)	1 to <2	1.15	2 to <3	1.25	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.0	<1000	1	<1000	1

- Section 1
  - The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.01. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.02. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kohekohe-Karioitahi Road.

Kohekohe-Karioitahi Road is a self-explaining road as the mean operating speeds (between 53 and 57 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kohekohe-Karioitahi Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Kohekohe-Karioitahi Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (55 km/hr). All of these factors contribute to the road's '1.97' IRR score, making it a medium-high-risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the second section Kohekohe-Karioitahi Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (57 km/hr). All of these factors contribute to the road's '2.01' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the third section Kohekohe-Karioitahi Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (53 km/hr). All of these factors contribute to the road's '2.02' IRR score, making it a high-risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'Medium' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 4 crashes in the last 5 years for the third section including 0 fatal, 2 serious, 2 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Kohekohe-Karioitahi Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kotare Road (Pollok)

The speed limit on Kotare Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Kotare Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 0.15 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kotare Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) could not be determined from MegaMaps data.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	Mean operating speed could not be determined from MegaMaps data. Site visit operating speed is 30km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.15
Annual Daily Traffic	N/A

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.95. For rural areas this corresponds to an IRR band of **Medium-High**.

#### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Kotare Road.*

Kotare Road is a self-explaining road as the operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kotare Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Kotare Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low operating speed (30 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Kotare Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Kotare Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h); however, this is considered appropriate based on the function of the road and the operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Lees Gully Road (Pollok)**

The speed limit on Lees Gully Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lees Gully Road connects to Awhitu Road to the south and Given Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 7 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 6 crashes between 2016 and 2020: 0 fatal, 0 serious, 5 minor and 1 non-injury crash. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Lees Gully Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 384 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Te Toro Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Given Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	5
DSI crashes during the period	0
Corridor Length (km)	5.21
Annual Daily Traffic	384

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.02. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Lees Gully Road.*

Lees Gully Road is a self-explaining road as the mean operating speed (60 km/h) is the same as the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Lees Gully Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Lees Gully Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (60 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 5 minor, and 1 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Lees Gully Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Lighthouse Road (Manukau Heads)

The speed limit on Lighthouse Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Lighthouse Road connects to Manukau Heads Road to the east. This road provides access to residential properties.
	This section is approximately 0.2 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Lighthouse Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) could not be determined from MegaMaps data.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Manukau Heads Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.2
Annual Daily Traffic	0

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.98. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Lighthouse Road.

Lighthouse Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Lighthouse Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Lighthouse Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low operating speed (20 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Lighthouse Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Lighthouse Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h); however, this is considered appropriate based on the function of the road and the operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Logan Drive (Manukau Heads)**

The speed limit on Logan Drive, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Logan Drive connects to Hudson Road to the north. This road provides access to residential properties.
	This section is approximately 0.21 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Logan Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Low</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 31 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Hudson Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.21
Annual Daily Traffic	100

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Low	0.40
Adjacent land use	Urban residential	3.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.13. For rural areas this corresponds to an IRR band of **Low**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Logan Drive.*

Logan Drive is a self-explaining road as the mean operating speeds (31 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Logan Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Logan Drive due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, low road-side hazards and low mean operating speed (31 km/h). All of these factors contribute to the road's 'Low' IRR score, making it a Low-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Logan Drive in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Mackinnon Road (Manukau Heads)**

The speed limit on Mackinnon Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Mackinnon Road connects to Big Bay Road to the north. This road provides access to residential properties.
	This section is approximately 0.20 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Mackinnon Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 253 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Big Bay Road: 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.20
Annual Daily Traffic	253

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.59. For rural areas this corresponds to an IRR band of **Low**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of MacKinnon Road.

MacKinnon Road is a self-explaining road as the mean operating speeds (26 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of MacKinnon Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for MacKinnon Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (26 km/h). All of these factors contribute to the road's 'Low' IRR score, making it a Low-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on MacKinnon Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Manukau Heads Road (Awhitu / Manukau Heads)**

Manukau Heads Road, Awhitu / Manukau Heads, is divided into two sections as follows: <sup>1</sup>

- Section 1: Manukau Heads Road between Awhitu Central Road and 120m south of Lighthouse Road
- Section 2: Manukau Heads Road between 120m south of Lighthouse Road and the northern end of Manukau Heads Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Manukau Heads Road, Awhitu / Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Manukau Heads Road connects to Kemp Road and Awhitu Central Road to the south. This road provides access to residential properties.	
	This section is approximately 7.30 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.28 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Manukau Heads Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 316 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 316 vehicles per day (vpd).

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 63 km/h.	This section has a mean operating speed of 63 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kemp Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Awhitu Central Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	1
DSI crashes during the period	1	1
Corridor Length (km)	7.30	0.28
Annual Daily Traffic	316	316

- Section 1
  - The Collective Risk score is 0.03. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 23.8. For rural areas this corresponds to a Personal Risk band of **High**
- Section 2
  - The Collective Risk score is 0.71. For rural areas this corresponds to a Collective Risk band of **High**

- o The Personal Risk score is 614.9. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Remote rural	1.00
Intersection density (per km)	1 to <2	1.15	2 to <3	1.25
Access density (per km)	1 to <2	1.01	<1	1.00
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - o The Infrastructure Risk Rating Score is 2.01. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - o The Infrastructure Risk Rating Score is 1.87. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Manukau Heads Road between Awhitu Central Road and 120m south of Lighthouse Road
- 40 km/h on Manukau Heads Road between 120m south of Lighthouse Road and the northern end of Manukau Heads Road

The first section of Manukau Heads Road is a self-explaining road as the mean operating speeds (63 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. The second section of Manukau Heads Road is a challenging conversations road as the mean operating speed (63 km/h) is higher than the proposed safe and appropriate speed. Engineering up of the two sections of Manukau Heads Road were considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section Manukau Heads Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (63 km/hr). All of these factors contribute to the road's 'High' IRR score. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Low**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years for the first section including 0 fatal, 1 serious, 1 minor, and 0 non-injury crashes.

A proposed speed limit of 40 km/h was selected for the second section of Manukau Heads Road due to a multitude of factors. The proposed speed reflects an extension of the 40km/h section of Hartner Road being brought further south to include a curve in Manukau Heads Road which has poor visibility. The access road to Manukau Heads Lighthouse just north of the curve can cause queues to propagate southwards down Manukau Heads Road, which the curve obstructs. Furthermore, the section has a narrow lane width, very narrow shoulder width, winding nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Manukau Heads Road in Awhitu / Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first section is 60 km/h which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the second section of Manukau Heads Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the visibility around curves supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Marae O Rehia Road (Karioitahi)

The speed limit on Marae O Rehia Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Marae O Rehia Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 1.34 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Marae O Rehia Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 187 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.34
Annual Daily Traffic	187

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.24. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Marae O Rehia Road.*

Marae O Rehia Road is a self-explaining road as the mean operating speeds (47 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Marae O Rehia Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Marae O Rehia Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (47 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a medium risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Marae O Rehia Road in Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Marae O Rehia Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (47 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Marshall Road (Manukau Heads)

The speed limit on Marshall Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Marshall Road connects to Grahams Beach Road to the south. This road provides access to residential properties.
	This section is approximately 0.49 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Marshall Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 14 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Grahams Beach Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.49
Annual Daily Traffic	14

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Marshall Road.*

Marshall Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Marshall Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Marshall Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Marshall Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Marshall Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Martin Road (Pollok)

The speed limit on Martin Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Martin Road connects to Given Road to the north. This road provides access to residential properties.
	This section is approximately 0.25 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Martin Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Given Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.25
Annual Daily Traffic	8

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Martin Road.*

Martin Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Martin Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Martin Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Martin Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Martin Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Matakawau Road (Awhitu)

Matakawau Road, Awhitu, is divided into three sections as follows: <sup>1</sup>

- Section 1: Matakawau Road between Awhitu Road and 400m southeast of Awhitu Road
- Section 2: Matakawau Road between 400m southeast of Awhitu Road and 10m west of Poaka Road
- Section 3: Matakawau Road between 10m west of Poaka Road and eastern end of Matakawau Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Matakawau Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Matakawau Road connects to Awhitu Road to the west. This road provides access to residential and commercial properties.		
	This section is approximately 0.40 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 3.73 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.16 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	street parking along this section. There are no cyclist amenities.	amenities along this road, and there is no on-street parking along this section.	street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Matakawau Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as "mixture of residential and some

Requirement	Comments		
	Section 1	Section 2	Section 3
	shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 63 km/h.	This section has a mean operating speed of 54 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 60 km/h (proposed 60 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	1	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.40	3.73	1.16
Annual Daily Traffic	292	292	292

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Curved	1.80	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural towns	2.50	Rural residential	1.50	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15	<1	1.00	3 to <5	1.50
Access density (per km)	>20	1.30	2 to <5	1.03	>20	1.30
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.35. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.62. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.46. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speeds recommended by Table 2.2 of the Speed Management Guide are:

- 40 km/h between Awhitu Road and 400m southeast of Awhitu Road (Section 1)
- <80km/h between 400m southeast of Awhitu Road and 10m west of Poaka Road (Section 2)
- 40 km/h between 10m west of Poaka Road and eastern end of Matakawau Road (Section 3)

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Matakawau Road between Awhitu Road and 400m southeast of Awhitu Road
- 60 km/h on Matakawau Road between 400m southeast of Awhitu Road and 10m west of Poaka Road
- 40 km/h on Matakawau Road between 10m west of Poaka Road and eastern end of Matakawau Road

Section 1 and 3 of Matakawau Road are challenging conversations roads as the mean operating speeds are higher than the proposed safe and appropriate speeds. Section 2 of Matakawau Road is a self-explaining road as the mean operating speeds are near the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Matakawau Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Matakawau Road due to a multitude of factors. These being the rural town land use, presence of school, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (50 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

A proposed speed limit of 60 km/h was selected for the second section of Matakawau Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (63 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 40 km/h was selected for the third section of Matakawau Road due to a multitude of factors. These being the rural town land use, narrow lane width, very narrow shoulder width, winding nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 60 km/h on Matakawau Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit is 60 km/h for the second section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit is 40 km/h for the third section which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Mayhead Road (Karioitahi)

The speed limit on Mayhead Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Mayhead Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 0.55 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Mayhead Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.55
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.48. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Mayhead Road.*

Mayhead Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Mayhead Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Mayhead Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Mayhead Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Mayhead Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – McGowan Road (Karioitahi)

The speed limit on McGowan Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	McGowan Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 1.05 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of McGowan Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 93 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.05
Annual Daily Traffic	93

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.64. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of McGowan Road.*

McGowan Road is a self-explaining road as the mean operating speeds (27 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of McGowan Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for McGowan Road due to a multitude of factors. These being the narrow lane and narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (27 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on McGowan Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – McNaughten Road (Karioitahi)

The speed limit on McNaughten Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	McNaughten Road connects to Taurangaruru Road to the south. This road provides access to residential properties.
	This section is approximately 0.42 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of McNaughten Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Taurangaruru Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.42
Annual Daily Traffic	20

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of McNaughten Road.*

McNaughten Road is a self-explaining road as the mean operating speeds (42 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of McNaughten Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for McNaughten Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a medium risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on McNaughten Road in Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for McNaughten Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – McPike Road (Pollok)

The speed limit on McPike Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	McPike Road connects to Pollok Wharf Road to the south. This road provides access to residential properties.
	This section is approximately 1.76 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of McPike Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Pollok Wharf Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.76
Annual Daily Traffic	83

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.69. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of McPike Road.*

McPike Road is a self-explaining road as the mean operating speeds (28 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of McPike Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for McPike Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (28 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on McPike Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Misa Road (Waiuku)

The speed limit on Misa Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Misa Road connects to Towers Road to the east. This road provides access to residential properties.
	This section is approximately 0.08 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Misa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Towers Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.08
Annual Daily Traffic	260

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 80 km/h for Misa Road within Auckland boundary, between Waiuku-Otaua Road and Towers Road (Auckland boundary).*

Misa Road is a self-explaining road as the mean operating speeds (47 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Misa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Misa Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Misa Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 80 km/h which is aligned with the recommended safe and appropriate speed. This road has only a short section within Auckland boundary. The 80km/h proposed speed will minimum the impact on Waikato District Council network.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Morrison Road (Manukau Heads)

The speed limit on Morrison Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Morrison Road connects to Orua Bay Road to the west. This road provides access to residential properties.
	This section is approximately 0.62 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Morrison Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Orua Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.62
Annual Daily Traffic	20

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Remote rural	1.00
Intersection density (per km)	<1	1.00
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.87. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Morrison Road.*

Morrison Road is a self-explaining road as the mean operating speeds (42 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Morrison Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Morrison Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Morrison Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Oldfield Road (Pollok)

The speed limit on Oldfield Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Oldfield Road connects to Craig Road to the north. This road provides access to residential properties.
	This section is approximately 0.14 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Oldfield Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 14 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Craig Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.14
Annual Daily Traffic	14

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.91. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Oldfield Road.*

Oldfield Road is a self-explaining road as the mean operating speeds (23 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Oldfield Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Oldfield Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (23 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Oldfield Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Opoia Drive (Awhitu)

Opoia Drive, Awhitu, is divided into two sections as follows: <sup>1</sup>

- Section 1: Opoia Drive between Matakawau Road and 25m north of Allan Road
- Section 2: Opoia Drive between 25m north of Allan Road and northern end of Opoia Drive.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Opoia Drive, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Opoia Drive connects to Matakawau Road to the south. This road provides access to residential properties.	
	This section is approximately 0.21 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.38 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is an unsealed, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Opoia Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Low</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Matakawau Raod:</b> 50 km/h (proposed 40 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.21	0.38
Annual Daily Traffic	292	292

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43	Low	0.40
Adjacent land use	Rural towns	2.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25	<1	1.00
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.74. For rural areas this corresponds to an IRR band of **Low-Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.35. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h for the first section.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for the second section.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Opoia Drive between Matakawau Road and 25m north of Allan Road
- 40 km/h on Opoia Drive between 25m north of Allan Road and northern end of Opoia Drive

Opoia Drive is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Opoia Drive was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Opoia Drive due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (30 km/hr). All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

A proposed speed limit of 40 km/h was selected for the second section of Opoia Drive due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, low road-side hazards and low mean operating speed (30 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Opoia Drive in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for the second section of Opoia Drive is 40 km/h which is in line with the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Orpheus Road (Manukau Heads)**

The speed limit on Orpheus Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Orpheus Road connects to Wattle Bay Road to the south. This road provides access to residential properties.
	This section is approximately 0.53 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Orpheus Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 21 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wattle Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.53
Annual Daily Traffic	21

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.54. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Orpheus Road.*

Orpheus Road is a self-explaining road as the mean operating speeds (22 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Orpheus Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Orpheus Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (22 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Orpheus Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Orpheus Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (22 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Orua Bay Road (Manukau Heads)

Orua Bay Road, Manukau Heads, is divided into two sections as follows: <sup>1</sup>

- Section 1: Orua Bay Road between Tram Gully Road and Wattle Bay Road
- Section 2: Orua Bay Road between Wattle Bay Road and northern end of Orua Bay Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Orua Bay Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Orua Bay Road connects to Grahams Beach Road and Tram Gully Road to the south. This road provides access to residential properties.	
	This section is approximately 2.70 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.27 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Orua Bay Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as <i>"only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."</i>	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as <i>"mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 240 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 240 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tram Gully Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Grahams Beach Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	2.70	0.27
Annual Daily Traffic	240	240

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Remote rural	1.00	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	1 to <2	1.01	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for the first section and 40 km/h for the second section.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Orua Bay Road between Tram Gully Road and Wattle Bay Road
- 40 km/h on Orua Bay Road between Wattle Bay Road and northern end of Orua Bay Road

Orua Bay Road is a self-explaining road as the mean operating speeds (50 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Orua Bay Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Orua Bay Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (50 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash for the first sections in the last 5 years including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 40 km/h was selected for the second section of Orua Bay Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (42 km/hr). All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Orua Bay Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit is 40 km/h for the second section which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Parakau Road (Pollok)

The speed limit on Parakau Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Parakau Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 1.62 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 1 fatal, 0 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crash. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Parakau Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	1.62
Annual Daily Traffic	62

- The Collective Risk score is 0.12. For rural areas this corresponds to a Collective Risk band of **Medium-High**
- The Personal Risk score is 546.79. For rural areas this corresponds to a Personal Risk band of **High**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.37. For rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Parakau Road.*

Parakau Road is a self-explaining road as the mean operating speeds (50 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Parakau Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Parakau Road due to a multitude of factors. These being the narrow lane and narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (50 km/h). All of these factors contribute to the road's 'Medium' IRR score. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Medium-High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 1 fatal, 0 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Parakau Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Park Road (Waiuku)

The speed limit on Park Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Park Road connects to Taurangaruru Road to the north and Karioitahi Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.83 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Park Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 130 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 62 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Taurangaruru Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Karioitahi Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.83
Annual Daily Traffic	130

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.71. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Park Road.*

Park Road is a self-explaining road as the mean operating speeds (62 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Park Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Park Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (62 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Park Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Poaka Road (Awhitu)

The speed limit on Poaka Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Poaka Road connects to Matakawau Road to the north. This road provides access to residential properties.
	This section is approximately 0.1 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Poaka Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Matakawau Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.1
Annual Daily Traffic	50

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.53. For rural areas this corresponds to an IRR band of **Low**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Poaka Road.*

Poaka Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Poaka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Poaka Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, moderate road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Low' IRR score, making it a Low-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Poaka Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Pokorua Road (Pollok)

The speed limit on Pokorua Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Pokorua Road connects to Kohekohe-Karioitahi Road to the south. This road provides access to residential properties.
	This section is approximately 0.63 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Pokorua Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 11 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 32 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.63
Annual Daily Traffic	11

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Pokorua Road.*

Pokorua Road is a self-explaining road as the mean operating speeds (32 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Pokorua Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Pokorua Road due to a multitude of factors. These being the narrow lane width, narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (32 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Pokorua Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Pollok Wharf Road (Pollok)

The speed limit on Pollok Wharf Road, between 75m east of Awhitu Road and eastern end of Pollok Wharf Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pollok Wharf Road connects to Awhitu Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 5.1 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Pollok Wharf Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 67 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 67 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Pollok Wharf Road</b> (between Awhitu Road and 75m east of Awhitu Road): 60km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	5.22
Annual Daily Traffic	67

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is 60 km/h for Pollok Wharf Road, between 75m east of Awhitu Road and eastern end of Pollok Wharf Road .*

Pollok Wharf Road is a self-explaining road as the mean operating speeds (67 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Pollok Wharf Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Pollok Wharf Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road and high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Pollok Wharf Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Ponsford Road (Pollok)

The speed limit on Ponsford Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ponsford Road connects to Awhitu Road to the west and Lees Gully Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 3.33 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Ponsford Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 40 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li><b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.33
Annual Daily Traffic	31

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Ponsford Road.*

Ponsford Road is a self-explaining road as the mean operating speeds (40 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Ponsford Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Ponsford Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (40 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Ponsford Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Rewarewa Road (Waiuku)

The speed limit on Rewarewa Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Rewarewa Road connects to Taurangaruru Road to the north. This road provides access to residential properties.
	This section is approximately 0.37 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Rewarewa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 36 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Taurangaruru Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.37
Annual Daily Traffic	20

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.49. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Rewarewa Road.*

Rewarewa Road is a self-explaining road as the mean operating speeds (36 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Rewarewa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Rewarewa Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (36 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Rewarewa Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Rewarewa Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (36 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ridgley Road (Karioitahi)

The speed limit on Ridgley Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Ridgley Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 1.28 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Ridgley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 19 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 38 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.28
Annual Daily Traffic	19

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.85. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Ridgley Road.*

Ridgley Road is a self-explaining road as the mean operating speeds (38 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Ridgley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Ridgley Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (38 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Ridgley Road in Kariotahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Ridgley Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (38 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Seaview Terrace (Manukau Heads)

The speed limit on Seaview Terrace, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Seaview Terrace connects to Hudson Road to the north. This road provides access to residential properties.
	This section is approximately 0.45 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Seaview Terrace were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Hudson Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.45
Annual Daily Traffic	100

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Seaview Terrace.*

Seaview Terrace is a self-explaining road as the mean operating speeds (34 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Seaview Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Seaview Terrace due to a multitude of factors. These being the narrow lane and very narrow shoulder width, winding nature of the road, moderate road-side hazards and low mean operating speed (34 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Seaview Terrace in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Sergeant Road (Awhitu)

The speed limit on Sergeant Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sergeant Road connects to Matakawau Road to the east and Allan Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 0.37 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Sergeant Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Matakawau Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Allan Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.37
Annual Daily Traffic	292

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural towns	2.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Sergeant Road.*

Sergeant Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Sergeant Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Sergeant Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Sergeant Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tahuna Pa Road (Karioitahi)

The speed limit on Tahuna Pa Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Tahuna Pa Road connects to Awhitu Road to the west. This road provides access to residential properties.
	This section is approximately 0.56 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tahuna Pa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.56
Annual Daily Traffic	62

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Tahuna Pa Road.*

Tahuna Pa Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Tahuna Pa Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Tahuna Pa Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Tahuna Pa Road in Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Tahuna Pa Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tahurangi Road (Karioitahi)

The speed limit on Tahurangi Road, Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Tahurangi Road connects to Awhitu Road to the east. This road provides access to residential properties.
	This section is approximately 2.13 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tahurangi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 145 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 100 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.13
Annual Daily Traffic	145

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.42. For rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Tahurangi Road.*

Tahurangi Road is a challenging conversations road as the mean operating speeds (100 km/h) are above the proposed safe and appropriate speeds. Engineering up of Tahurangi Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Tahurangi Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and operating speeds of surrounding corridors. All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Tahurangi Road in Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Tahurangi Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the proposed speeds of surrounding corridors support the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tainui Road (Awhitu)

The speed limit on Tainui Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Tainui Road connects to Matakawau Road to the north. This road provides access to residential properties.
	This section is approximately 0.12 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tainui Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two Lane Undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural towns using on-site information and geomaps. The IRR defines Rural towns as " <i>mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Matakawau Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.12
Annual Daily Traffic	292

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two Lane Undivided	3.7
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural towns	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.06. For rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Tainui Road.*

Tainui Road is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tainui Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Tainui Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, High road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 50 km/h on Tainui Road (Awhitu) in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Taurangaruru Road (Waiuku / Karioitahi)

The speed limit on Taurangaruru Road, Waiuku / Karioitahi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taurangaruru Road connects to Awhitu Road to the east and Kohekohe-Karioitahi Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 4.51 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Taurangaruru Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 518 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 60 km/h (proposed 60 km/h)</li> <li><b>Kohekohe-Karioitahi Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	4.51
Annual Daily Traffic	518

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.75. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Taurangaruru Road.*

Taurangaruru Road is a self-explaining road as the mean operating speeds (60 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Taurangaruru Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Taurangaruru Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (60 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Taurangaruru Road in Waiuku / Karioitahi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Te Toro Road (Pollok)

The speed limit on Te Toro Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Toro Road connects to Lees Gully Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 3.21 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Te Toro Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 581 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h. Site visit operating speed is 75km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li><b>Lees Gully Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	3.21
Annual Daily Traffic	581

- The Collective Risk score is 0.06. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
- The Personal Risk score is 29.3. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.43. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 80 km/h for the full length of Te Toro Road.*

Te Toro Road is a self-explaining road as the mean operating speed (60-75 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Te Toro Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Te Toro Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium' IRR score.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Te Toro Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 80 km/h for Te Toro Road which is higher than the Speed Management Guide recommendation (<80km/h) but are considered appropriate when considering the straight nature of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (75km/h)

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tearoe Road (Manukau Heads)

The speed limit on Tearoe Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Tearoe Road connects to Big Bay Road to the east. This road provides access to residential properties.
	This section is approximately 0.46 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tearoe Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 10 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Big Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.46
Annual Daily Traffic	10

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.47. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Tearoe Road.*

Tearoe Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Tearoe Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Tearoe Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Tearoe Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Tearoe Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80km/h), this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Tindall Road (Awhitu)

Tindall Road, Awhitu, is divided into two sections as follows: <sup>1</sup>

- Section 1: Tindall Road between Awhitu Road and 765m west of Awhitu Road
- Section 2: Tindall Road between 765m west of Awhitu Road and western end of Tindall Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Tindall Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Tindall Road connects to Awhitu Road to the east. This road provides access to residential properties.	
	This section is approximately 0.77 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.61 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is an unsealed, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tindall Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 53 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 53 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 35 km/h.	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.77	0.61
Annual Daily Traffic	53	53

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Winding	3.50	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00
Access density (per km)	1 to <2	1.01	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.10. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Tindall Road between Awhitu Road and 765m west of Awhitu Road
- 60 km/h on Tindall Road between 765m west of Awhitu Road and western end of Tindall Road

Tindall Road is a self-explaining road as the mean operating speeds (35 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Tindall Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Tindall Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (35 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section Tindall Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (28 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Tindall Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Towers Road (Waiuku)

The speed limit on Towers Road, Waiuku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Towers Road connects to Misa Road to the west and Hull Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.15 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Towers Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Misa Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Hull Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.15
Annual Daily Traffic	200

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.85. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 80 km/h for the full length of Towers Road.

Towers Road is a self-explaining road as the mean operating speeds (55 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Towers Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Towers Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (55 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Towers Road in Waiuku, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Towers Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) because the road crossing the boundary with Waikato District Council. 80 km/h is more appropriate for the network consistence.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Tram Gully Road (Manukau Heads)**

The speed limit on Tram Gully Road, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tram Gully Road connects to Awhitu Road to the south and Grahams Beach Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 2.13 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Tram Gully Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 577 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 70 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Grahams Beach Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.13
Annual Daily Traffic	577

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.00. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Tram Gully Road.

Tram Gully Road is a challenging conversations road as the mean operating speeds (70 km/h) are above the proposed safe and appropriate speeds. Engineering up of Tram Gully Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Tram Gully Road due to a multitude of factors. These being the medium lane and very narrow shoulder width, winding nature of the road, severe road-side hazards and mean operating speed (70 km/h). All of these factors contribute to the road's 'High' IRR score making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Tram Gully Road in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Turner Place (Manukau Heads)**

The speed limit on Turner Place, Manukau Heads has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Turner Place connects to Wattle Bay Road to the south. This road provides access to residential properties.
	This section is approximately 0.04 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Turner Place were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wattle Bay Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.04
Annual Daily Traffic	20

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.16. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Turner Place.

Turner Place is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Turner Place was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Turner Place due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a High-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Turner Place in Manukau Heads, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Waipipi Wharf Road (Pollok)**

Waipipi Wharf Road, Pollok, is divided into two sections as follows: <sup>1</sup>

- Section 1: Waipipi Wharf Road between Awhitu Road and 20m east of Furniss Road
- Section 2: Waipipi Wharf Road between 20m east of Furniss Road and eastern end of Waipipi Wharf Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Waipipi Wharf Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Waipipi Wharf Road connects to Awhitu Road to the west. This road provides access to residential properties.	
	This section is approximately 0.29 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.77 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Waipipi Wharf Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 197 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 43 km/h.	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.29	1.77
Annual Daily Traffic	197	197

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.75. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.49. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for the first section and 80 km/h for the second section.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Waipipi Wharf Road between Awhitu Road and 20m east of Furniss Road
- 60 km/h on Waipipi Wharf Road between 20m east of Furniss Road and eastern end of Waipipi Wharf Road

Waipipi Wharf Road is a self-explaining road as the mean operating speeds (43-52 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Waipipi Wharf Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Waipipi Wharf Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (43 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Waipipi Wharf Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (52 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a medium risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Waipipi Wharf Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the second section of Waipipi Wharf Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (52 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Walters Road (Awhitu)

The speed limit on Walters Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Walters Road connects to Brook Road to the south. This road provides access to residential properties.
	This section is approximately 0.42 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Walters Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 12 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Brook Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.42
Annual Daily Traffic	12

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.45. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Walters Road.*

Walters Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Walters Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Walters Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (42 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Walters Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Walters Road is 40 km/h which is in line with the speed limit recommended by the Speed Management Guide (<80 km/h), this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High





## Speed Limit Review – West Coast Road (Awhitu)

West Coast Road, Awhitu, is divided into two sections as follows:<sup>1</sup>

- Section 1: West Coast Road between Awhitu Road and 2390m west of Awhitu Road
- Section 2: West Coast Road between 2390m west of Awhitu Road and western end of West Coast Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on West Coast Road, Awhitu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	West Coast Road connects to Awhitu Road to the east. This road provides access to residential properties.	
	This section is approximately 2.39 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.95 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of West Coast Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Remote rural using on-site information and geomaps. The IRR defines Remote rural as "only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awhitu Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	2.39	0.95
Annual Daily Traffic	83	83

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Remote rural	1.00
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	1 to <2	1.01
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.78. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on West Coast Road between Awhitu Road and 2390m west of Awhitu Road
- 60 km/h on West Coast Road between 2390m west of Awhitu Road and western end of West Coast Road

West Coast Road is a self-explaining road as the mean operating speeds (47 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of West Coast Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for both sections of West Coast Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (47 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>2</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on West Coast Road in Awhitu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Westhead Road (Pollok)

The speed limit on Westhead Road, Pollok has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Westhead Road connects to Te Toro Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.41 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Westhead Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Te Toro Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.41
Annual Daily Traffic	83

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.69. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Westhead Road.*

Westhead Road is a self-explaining road as the mean operating speeds (42 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Westhead Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Westhead Road due to a multitude of factors. These being the narrow lane and very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Westhead Road in Pollok, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Wharf Road (Clarks Beach)**

The speed limit on Wharf Road, Clarks Beach, between Clarks Beach Road and 400m west of Clarks Beach Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Wharf Road connects to Clarks Beach Road to the east. This road provides access to residential properties.
	This section is approximately 0.4 km in length. It is classified as a secondary collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Wharf Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 554 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wharf Road</b>, west section: 50km/h</li> <li>• <b>Clarks Beach Road</b>: 80 km/h (proposed 50 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.4
Annual Daily Traffic	554

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.81. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 50 km/h for Wharf Road, between Clarks Beach Road and 400m west of Clarks Beach Road.

Wharf Road is a self-explaining road as the mean operating speeds (52 km/h) are near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit.

A proposed speed limit of 50 km/h was selected for Wharf Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, future urban development and land use change.

After considering all of the above factors, the existing speed limit of 80 km/h on Wharf Road in Clarks Beach, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Wharf Road is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but is considered appropriate when considering the consistency of the adjoining roads.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Access Road (Kumeu)**

Access Road, Kumeu, is divided into three sections as follows: <sup>1</sup>

- Section 1: Access Road between SH16 and 700m southwest of SH16
- Section 2: Access Road between 700m southwest of SH16 and 1000m southwest of SH16
- Section 3: Access Road between 1000m southwest of SH16 and Station Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Access Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Access Road connects to SH16 to the east and Station Road to the west. This road provides access to residential and commercial properties.		
	This section is approximately 0.70 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.30 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.01 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	road. There is on-street parking along this section.	road. There is on-street parking along this section.	road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 1 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Access Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Access Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using on-site information and	The adjacent land use is classified as Commercial big box using on-site information and	The adjacent land use is classified as Rural residential using on-site information and

Requirement	Comments		
	Section 1	Section 2	Section 3
	geomaps. The IRR defines Commercial big box as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	geomaps. The IRR defines Commercial big box as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."	geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1651 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1651 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1651 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 50 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 51 km/h.	This section has a mean operating speed of 71 km/h.	This section has a mean operating speed of 71 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>State Highway 16: 60 km/h</li> <li>Station Road: 80 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	3	3	2
DSI crashes during the period	1	1	0
Corridor Length (km)	0.70	0.30	1.01
Annual Daily Traffic	1651	1651	1651

- Section 1
  - The Collective Risk score is 0.29. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 47.4. For rural areas this corresponds to a Personal Risk band of **High**
- Section 2
  - The Collective Risk score is 0.67. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 110.6. For rural areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80	Severe	2.80
Adjacent land use	Commercial big box	4.00	Commercial big box	4.00	Rural residential	1.50
Intersection density (per km)	5 to <10	2.60	<1	1.00	<1	1.00
Access density (per km)	>20	1.30	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 2.71. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.97. For urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.54. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide for the first and second section of Access Road is 40 km/h.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide for the third section of Access Road is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Access Road between between SH16 and 700m southwest of SH16 (Section 1)
- 50 km/h on Access Road between 700m southwest of SH16 and 1000m southwest of SH16 (Section 2)
- 80 km/h on Access Road between 1000m southwest of SH16 and Station Road (Section 3)

The first and third section of Access Road is a self-explaining road as the mean operating speeds are near or below the proposed safe and appropriate speeds, despite the existing speed limits. The second section of Access Road is a challenging conversations road as the mean operating speeds (71 km/h) are above the proposed safe and appropriate speeds. Engineering up of Access Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the first section of Access Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (51 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup> Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'High' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years for the first section including 0 fatal, 1 serious, 1 minor, and 1 non-injury crashes.

A proposed speed limit of 50 km/h was selected for the second section of Access Road due to a multitude of factors. These being the future urban development, medium lane width, narrow shoulder width, straight nature of the road, and severe road-side hazards. All of these factors contribute to the road's 'Low-Medium' IRR score, making it a Low-Medium-risk road. Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'High' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years for the second section including 1 fatal, 0 serious, 1 minor, and 1 non-injury crashes.

A proposed speed limit of 80 km/h was selected for the third section of Access Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, straight nature of the road, severe road-side hazards and mean operating speed (71 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years for the third section including 0 fatal, 0 serious, 0 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limits on Access Road in Kumeu, are not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for the first section of Access Road is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (51 km/h).

The recommended safe and appropriate speed limit for the second section of Access Road is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but is considered appropriate when considering the nature and function of the road. It's a short extension to the current 50km/h section.

The recommended safe and appropriate speed limit for the third section of Access Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (71 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Amreins Road (Taupaki)

Amreins Road, Taupaki, is divided into three sections as follows: <sup>1</sup>

- Section 1: Amreins Road between Taupaki Road and 800m south of Taupaki Road
- Section 2: Amreins Road between 800m south of Taupaki Road and 1440m north of McEntee Road
- Section 3: Amreins Road between McEntee Road and 1440m north of McEntee Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Amreins Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Amreins Road connects to Taupaki Road to the north and McEntee Road to the south. This road provides access to residential properties.		
	This section is approximately 0.80 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.96 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.44 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Amreins Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural

Requirement	Comments		
	Section 1	Section 2	Section 3
	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 671 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 671 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 162 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h between McEntee Road and 80m north of McEntee Road. The existing speed limit is 80km/h for the remaining section.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.	This section has a mean operating speed of 61 km/h.	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Taupaki Road:</b> 60 km/h</li> <li>• <b>McEntee Road:</b> 50 km/h</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	1
DSI crashes during the period	0	0	0
Corridor Length (km)	0.80	1.96	1.44
Annual Daily Traffic	671	671	162

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00	<1	1.00
Access density (per km)	>20	1.30	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.22. For Rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.09. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.94. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all three sections of Amreins Road.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Amreins Road between Taupaki Road and 800m south of Taupaki Road (Section 1)
- 60 km/h on Amreins Road between 800m south of Taupaki Road and 1440m north of McEntee Road (Section 2)
- 60 km/h on Amreins Road between 80m north of McEntee Road and 1440m north of McEntee Road (Section 3)

Amreins Road is a self-explaining road as the mean operating speeds (59-61 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Amreins Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Amreins Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (59-61 km/hr). All of these factors contribute to the road's 'Medium-High' and 'High' IRR scores, making it a high risk road.<sup>2</sup>

After considering all of the above factors, the existing speed limit of 80 km/h on Amreins Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for Amreins Road which is aligned with the recommended safe and appropriate speed. The existing 50km/h section connecting with McEntee Road will be remained.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Annandale Road (Kumeu / Taupaki)

The speed limit on Annandale Road, Kumeu / Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Annandale Road connects to Hanham Road to the north and Cuthbert Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 3.33 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Annandale Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 292 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Hanham Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Cuthbert Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.33
Annual Daily Traffic	292

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Annandale Road.*

Annandale Road is a self-explaining road as the mean operating speeds (58 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Annandale Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Annandale Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (58 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Annandale Road in Kumeu / Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Annett Road (Huapai)

Annett Road, Huapai, is divided into two sections as follows: <sup>1</sup>

- Section 1: Annett Road between Awa Road and Fork Road
- Section 2: Annett Road between Fork and the western end of Annett Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Annett Road, Huapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Annett Road connects to Awa Road to the east. This road provides access to residential properties.	
	This section is approximately 1.3 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.28 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Annett Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 321 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 321 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awa Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.3	0.28
Annual Daily Traffic	321	321

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Tortuous	6
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	<1	1	<1	1
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume (vpd)	<1000	1	<1000	1

- Section 1
  - The Infrastructure Risk Rating Score is 1.79. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.31. For rural areas this corresponds to an IRR band of **High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is 60 km/h on Annett Road, full length.

Annett Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Annett Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Annett Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (55 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the second section of Annett Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Annett Road in Huapai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Awa Road (Kumeu)**

The speed limit on Awa Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Awa Road connects to Tawa Road to the south and Foster Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 2.86 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 11 crashes between 2016 and 2020: 0 fatal, 0 serious, 7 minor and 4 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Awa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 696 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 54 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Tawa Road: 100 km/h (proposed 60 km/h)</li> <li>• Foster Road: 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	7
DSI crashes during the period	0
Corridor Length (km)	2.86
Annual Daily Traffic	696

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.79
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.061
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.78. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Awa Road.*

Awa Road is a self-explaining road as the mean operating speeds (54 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Awa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Awa Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (54 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 11 crashes in the last 5 years including 0 fatal, 0 serious, 7 minor, and 4 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Awa Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Awanohi Road (Redvale)

The speed limit on Awanohi Road, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Awanohi Road connects to Durey Road to the west and East Coast Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.86 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Awanohi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 605 vehicles per day (vpd). This level of traffic volume is lower than the traffic survey of 1070 vpd.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 68 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• Durey Road 100km/h (proposed 60 km/h)</li> <li>• East Coast Road: 80 km/h</li> <li>• Wright Road: 70 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.86
Annual Daily Traffic	605

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.07. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Awanohi Road.

Awanohi Road is a challenging conversations road as the mean operating speeds (68 km/h) are above the proposed safe and appropriate speeds. Engineering up of Awanohi Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Awanohi Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and mean operating speed (68 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Awanohi Road in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Bawden Road (Redvale, Dairy Flat)**

The speed limit on Bawden Road, Redvale, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bawden Road connects to East Coast Road to the east and Dairy Flat Highway to the south. This road provides access to residential properties.</p> <p>This section is approximately 4.32 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 2 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Bawden Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 835 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 63 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• East Coast Road: 100 km/h (proposed 80 km/h)</li> <li>• Dairy Flat Highway: 80 km/h</li> <li>• Dairy Stream Road: 80 km/h (proposed 60 km/h)</li> <li>• Oregon Park: 80 km/h (proposed 60 km/h)</li> <li>• Bobs Way: 80 km/h (proposed 60 km/h)</li> <li>• Top Road (Redvale): 80 km/h (proposed 60 km/h)</li> <li>• Wilson Road (Redvale): 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	4.32
Annual Daily Traffic	835

- The Collective Risk score is 0.05. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
- The Personal Risk score is 15.18. For rural areas this corresponds to a Personal Risk band of **High**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.76. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Bawden Road.*

Bawden Road is a self-explaining road as the mean operating speeds (63 km/h) are near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Bawden Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Bawden Road due to a multitude of factors. These being the, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (63 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Low-Medium**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor, and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Bawden Road in Redvale, Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Bobs Way (Dairy Flat)

The speed limit on Bobs Way, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Bobs Way connects to Bawden Road to the south. This road provides access to residential properties.
	This section is approximately 0.26 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Bobs Way were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bawden Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.26
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.56. For rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Bobs Way.*

Bobs Way is a self-explaining road as the mean operating speeds (42 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Bobs Way was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Bobs Way due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, moderate road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Bobs Way in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Bobs Way is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Boord Crescent (Kumeu)

The speed limit on Boord Crescent, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Boord Crescent connects to Trotting Course Drive to the north. This road provides access to residential properties.</p> <p>This section is approximately 3.14 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Boord Crescent were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 633 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Trotting Course Drive:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	3.14
Annual Daily Traffic	633

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.65. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Boord Crescent.*

Boord Crescent is a self-explaining road as the mean operating speeds (45 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Boord Crescent was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Boord Crescent due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (45 km/h). All of these factors contribute to the road's 'medium-high' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Boord Crescent in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed (<80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cable Road (Waimauku)

Cable Road, Waimauku, is divided into two sections as follows: <sup>1</sup>

- Section 1: Cable Road between 560m east of Valley Road and Hinau Road
- Section 2: Cable Road between Valley Road and 560m east of Valley Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Cable Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Cable Road connects to Valley Road to the west and Hinau Road to the east. This road provides access to residential properties.	
	This section is approximately 0.56 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.03 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and Serious Injury (DSI) crashes.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Cable Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 196 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 185 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Valley Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Hinau Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.56	1.03
Annual Daily Traffic	196	185

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Straight	1.00	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.45. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.72. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide for the first section of Cable Road is 80 km/h.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide for the second section of Cable Road is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Cable Road between 560m east of Valley Road and Hinau Road
- 40 km/h on Cable Road between Valley Road and 560m east of Valley Road

Cable Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Cable Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Cable Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (42 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

A proposed speed limit of 40 km/h was selected for the second section of Cable Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (34 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

After considering all of the above factors, the existing speed limits on Cable Road in Waimauku are not considered to be safe and appropriate speed limits for this road.

The proposed safe and appropriate speed limit for the first section of Cable Road is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (42 km/h) supports the reduction.

The proposed safe and appropriate speed limit for the second section of Cable Road is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (34 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Coster Road (Muriwai)

The speed limit on Coster Road, Muriwai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Coster Road connects to Oaia Road to the west. This road provides access to residential properties.
	This section is approximately 0.54 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Coster Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Oaia Road:</b> 50 km/h</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.54
Annual Daily Traffic	100

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.48. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Coster Road.*

Coster Road is a self-explaining road as the mean operating speeds (27 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Coster Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Coster Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (27 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Coster Road in Muriwai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Coster Road is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (<80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (27 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cuthbert Road (Taupaki)

The speed limit on Cuthbert Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cuthbert Road connects to Annandale Road to the north and Hunter Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.71 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Cuthbert Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 277 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Annandale Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Hunter Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.71
Annual Daily Traffic	277

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.04. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Cuthbert Road.

Cuthbert Road is a self-explaining road as the mean operating speeds (52 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Cuthbert Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Cuthbert Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (52 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Cuthbert Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed (<80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Dairy Stream Road (Dairy Flat)**

The speed limit on Dairy Stream Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dairy Stream Road connects to Postman Road to the north and Bawden Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.76 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 2 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Dairy Stream Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 516 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 54 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Postman Road:</b> 80 km/h (proposed 80 km/h)</li> <li>• <b>Bawden Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	0.76
Annual Daily Traffic	516

- The Collective Risk score is 0.26. For rural areas this corresponds to a Collective Risk band of **High**
- The Personal Risk score is 138.99. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.09. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Dairy Stream Road.

Dairy Stream Road is a self-explaining road as the mean operating speeds (54 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Dairy Stream Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Dairy Stream Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (54 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road. <sup>1</sup> Due to adverse crash history on the road, the collective and personal risk of this road are classified as 'High' and 'High', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor, and 2 non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Dairy Stream Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Durey Road (Dairy Flat)**

The speed limit on Durey Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Durey Road connects to Dairy Flat Highway to the west and Awanohi Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 1.42 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Durey Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 732 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Dairy Flat Highway:</b> 80 km/h</li> <li>• <b>Awanohi Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Oak Valley Road:</b> 80 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	0
Corridor Length (km)	1.42
Annual Daily Traffic	732

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.79. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Durey Road.*

Durey Road is a self-explaining road as the mean operating speeds (61 km/h) is near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Durey Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Durey Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (61 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor, and 1 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Durey Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dysart Lane (Kumeu)

The speed limit on Dysart Lane, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Dysart Lane connects to Pomona Road to the south. This road provides access to residential properties.
	This section is approximately 0.52 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Dysart Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Pomona Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.52
Annual Daily Traffic	150

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.46. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Dysart Lane.*

Dysart Lane is a self-explaining road as the mean operating speeds (30 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Dysart Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Dysart Lane due to a multitude of factors. These being the narrow lane width, narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Dysart Lane in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Dysart Lane is 60 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Farrand Road (Kumeu)**

The speed limit on Farrand Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Farrand Road connects to Waitakere Road to the east and a "no exit" road to the west. This road provides access to residential properties.</p> <p>This section is approximately 0.53 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Farrand Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waitakere Road:</b> 80 km/h</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.53
Annual Daily Traffic	52

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Farrand Road.

Farrand Road is a self-explaining road as the mean operating speeds (26 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Farrand Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Farrand Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (26 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 80 km/h on Farrand Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Fletcher Road (Waimauku)**

Fletcher Road, Waimauku, is divided into three sections as follows: <sup>1</sup>

- Section 1: Fletcher Road between Muriwai Road and 20m east of Taha Road
- Section 2: Fletcher Road between 20m east of Taha Road and 30m west of Mahana Road
- Section 3: Fletcher Road between 30m west of Mahana Road and the western end of Fletcher Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Fletcher Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Fletcher Road connects to Muriwai Road to the east. This road provides access to residential properties.		
	This section is approximately 0.86 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.48 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.63 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	on-street parking along this section.	road, and there is no on-street parking along this section.	on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Fletcher Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 135 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 325 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 325 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 36 km/h.	This section has a mean operating speed of 31 km/h.	This section has a mean operating speed of 31 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Muriwai Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Taha Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Mahana Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.86	0.48	0.63
Annual Daily Traffic	135	325	325

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Tortuous	6.00	Curved	1.80	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	3 to <5	1.50	<1	1.00
Access density (per km)	10 to <20	1.10	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.72. For Rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.88. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.13. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all three sections of Fletcher Road.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Fletcher Road between Muriwai Road and 20m east of Taha Road (Section 1)
- 40 km/h on Fletcher Road between 20m east of Taha Road and 30m west of Mahana Road (Section 2)
- 40 km/h on Fletcher Road between 30m west of Mahana Road and the western end of Fletcher Road (Section 3)

Fletcher Road is a self-explaining road as the mean operating speeds (31-36 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Fletcher Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Fletcher Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (36 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 40 km/h was selected for the second section of Fletcher Road due to a multitude of factors. These being the adjoining unsealed sections, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (31 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

A proposed speed limit of 40 km/h was selected for the third section of Fletcher Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (31 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the third section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Fletcher Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for all three sections of Fletcher Road is 40 km/h which is higher than the Speed Management Guide recommendation (60 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (36 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Foley Quarry Road (Dairy Flat)

Foley Quarry Road, Dairy Flat, is divided into two sections as follows:<sup>1</sup>

- Section 1: Foley Quarry Road between Dairy Flat Highway and 1545m northeast of Dairy Flat Highway
- Section 2: Foley Quarry Road between 1545m northeast of Dairy Flat Highway and the northeastern end of Foley Quarry Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Foley Quarry Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Foley Quarry Road connects to Dairy Flat Highway to the west. This road provides access to residential properties.	
	This section is approximately 1.55 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.73 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal,	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal,

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	0 serious, 0 minor and 1 non-injury crash. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Foley Quarry Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 40 km/h.	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Dairy Flat Highway:</b> 80 km/h</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	1
Corridor Length (km)	1.55	0.73
Annual Daily Traffic	140	140

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.27. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 535.42. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00
Road alignment	Tortuous	6.00	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	>20	1.30	>20	1.30
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.25. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.50. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Foley Quarry Road between Dairy Flat Highway and 1545m northeast of Dairy Flat Highway (Section 1)
- 40 km/h on Foley Quarry Road between 1545m northeast of Dairy Flat Highway and the north-eastern end of Foley Quarry Road (Section 2)

Foley Quarry Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Foley Quarry Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Foley Quarry Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (40 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 40 km/h was selected for the second section of Foley Quarry Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (28 km/h). All of these factors contribute to the road's 'High' IRR score. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Foley Quarry Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first section which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for the second section of Foley Quarry Road is 40 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (28 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Fork Road (Kumeu)

The speed limit on Fork Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Fork Road connects to Annett Road to the north. This road provides access to residential properties.
	This section is approximately 0.53 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Fork Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Annett Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.53
Annual Daily Traffic	124

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.72. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Fork Road.*

Fork Road is a self-explaining road as the mean operating speeds (28 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Fork Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Fork Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards and low mean operating speed (28 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Fork Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Fork Road is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (60 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (28 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Foster Road (Kumeu)

Foster Road, Kumeu, is divided into three sections as follows:<sup>1</sup>

- Section 1: Foster Road between State Highway 16 and Awa Road
- Section 2: Foster Road between Awa Road and the western end of Kauri Crescent
- Section 3: Foster Road between the western end of Kauri Crescent and School Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Foster Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Foster Road connects to State Highway 16 to the east and School Road to the west. This road provides access to residential properties.		
	This section is approximately 1.68 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.75 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.61 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	on-street parking along this section.	on-street parking along this section.	on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 2 serious, 1 minor and 1 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Foster Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural

Requirement	Comments		
	Section 1	Section 2	Section 3
	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1147 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h.	This section has a mean operating speed of 58 km/h.	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>State Highway 16:</b> 100 km/h</li> <li>• <b>Trigg Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Awa Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>School Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	3	0
DSI crashes during the period	0	2	0
Corridor Length (km)	1.68	1.75	0.61
Annual Daily Traffic	1147	1147	1147

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.23. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 54.57. For rural areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Curved	1.80	Tortuous	6.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	Severe	2.80
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15	3 to <5	1.50
Access density (per km)	10 to <20	1.10	10 to <20	1.10	5 to <10	1.06
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.89. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.86. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.57. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all three sections of Foster Road.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Foster Road between State Highway 16 and Awa Road (Section 1)
- 60 km/h on Foster Road between Awa Road and the western end of Kauri Crescent (Section 2)
- 60 km/h on Foster Road between the western end of Kauri Crescent and School Road (Section 3)

Foster Road is a self-explaining road as the mean operating speeds (58-60 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Foster Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first and second sections of Foster Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards, and low mean operating speed (60 km/hr). All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

Due to adverse crash history on the second section of Foster Road, the collective and personal risk of this road are classified as '**High**' and '**High**' respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

A proposed speed limit of 60 km/h was selected for the third section of Foster Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards, and low mean operating speed (58 km/hr). All these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from NZTA's CAS database shows:

- 2 crashes in the last 5 years for the first section including 0 fatal, 0 serious, 1 minor, and 1 non-injury crashes.
- 4 crashes in the last 5 years for the second section including 0 fatal, 2 serious, 1 minor, and 1 non-injury crashes.
- 1 crash in the last 5 years for the third section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Foster Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for all three sections of Foster Road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hamilton Road (Waimauku)

The speed limit on Hamilton Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Hamilton Road connects to Muriwai Road to the east. This road provides access to residential properties.
	This section is approximately 1.32 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hamilton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 248 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Muriwai Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.32
Annual Daily Traffic	248

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.21. For rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Hamilton Road.*

Hamilton Road is a self-explaining road as the mean operating speeds (23 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hamilton Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Hamilton Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Hamilton Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Hamilton Road is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide; this is considered appropriate based on the function of the road and the mean operating speed (23 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hanham Road (Kumeu)

Hanham Road, Kumeu, is divided into two sections as follows: <sup>1</sup>

- Section 1: Hanham Road between Waitakere Road and 590m east of Tawa Road
- Section 2: Hanham Road between 590m east of Tawa Road and Tawa Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hanham Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Hanham Road connects to Waitakere Road to the east and Tawa Road to the west. This road provides access to residential properties.	
	This section is approximately 1.64 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.59 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 4 non-injury crashes. This resulted in 0	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hanham Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 789 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 789 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 64 km/h.	This section has a mean operating speed of 62 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waitakere Road:</b> 80 km/h (proposed 80 km/h)</li> <li>• <b>Tawa Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.64	0.59
Annual Daily Traffic	789	789

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Tortuous	6.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	>20	1.30	>20	1.30
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.78. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.31. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is 60 km/h on Hanham Road.*

Hanham Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Hanham Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Hanham Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards, and low mean operating speed (64 km/h). All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 4 crashes in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 4 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the second section of Hanham Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, tortuous nature of the road, high road-side hazards, and low mean operating speed (62 km/h). All these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 80 km/h on Hanham Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Hanham Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Henwood Road (Taupaki)**

The speed limit on Henwood Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Henwood Road connects to Nixon Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.28 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Henwood Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as <i>"rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 258 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 39 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Nixon Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.28
Annual Daily Traffic	258

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.70. For rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Henwood Road.

Henwood Road is a self-explaining road as the mean operating speeds (39 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Henwood Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Henwood Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (39 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Henwood Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Hinau Road (Waimauku)**

The speed limit on Hinau Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hinau Road connects to School Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 1.57 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Hinau Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 294 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 41 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>School Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Cable Road:</b> 80 km/h (proposed 40 &amp; 60km/h [2 sections])</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.57
Annual Daily Traffic	294

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.79
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.37. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Hinau Road.*

Hinau Road is a self-explaining road as the mean operating speeds (41 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Hinau Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Hinau Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speed (41 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Hinau Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed (<80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Hunter Road (Taupaki)**

Hunter Road, Taupaki, is divided into two sections as follows:<sup>1</sup>

- Section 1: Hunter Road between Waitakere Road and 610m west of Waitakere Road
- Section 2: Hunter Road between 610m west of Waitakere Road and 230m west of Cuthbert Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Hunter Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Hunter Road connects to Waitakere Road to the east and Cuthbert Road to the north. This road provides access to residential properties.	
	This section is approximately 0.61 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.3 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	Therefore, there are no Death and Serious Injury (DSI) crashes.	Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Hunter Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 391 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 391 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 52 km/h.	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waitakere Road:</b> 80 km/h (proposed 80 km/h)</li> <li>• <b>Cuthbert Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.61	1.3
Annual Daily Traffic	391	391

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00
Access density (per km)	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.00. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is 60 km/h on Hunter Road*

Hunter Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Hunter Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Hunter Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (52 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Hunter Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (52 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Hunter Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Hunter Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Joseph Dunstan Drive (Taupaki)

The speed limit on Joseph Dunstan Drive, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Joseph Dunstan Drive connects to Taupaki Road to the west. This road provides access to residential properties.
	This section is approximately 0.89 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Joseph Dunstan Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 39 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 36 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Taupaki Road:</b> 60 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.89
Annual Daily Traffic	39

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.79
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.79. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Joseph Dunstan Drive.*

Joseph Dunstan Drive is a self-explaining road as the mean operating speeds (36 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Joseph Dunstan Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Joseph Dunstan Drive due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (36 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Joseph Dunstan Drive in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kauri Crescent (Waimauku)

Kauri Crescent (East), Waimauku, is divided into two sections as follows:<sup>1</sup>

- Section 1: Kauri Crescent (East) between Foster Road and the southern end of Kauri Crescent (East).
- Section 2: Kauri Crescent (West) between Foster Road and the southern end of Kauri Crescent (West).

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Kauri Crescent, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Kauri Crescent (East) and Kauri Crescent (West) both connect to Foster Road to the north. These roads provide access to residential properties.	
	This section is approximately 1.43 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.58 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Kauri Crescent were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 178 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 42 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Foster Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.43	0.58
Annual Daily Traffic	178	42

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Unsealed	10.00
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.50. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.47. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is 50km/h on*

- *40 km/h on Kauri Crescent (East) between Foster Road and the southern end of Kauri Crescent (East) (Section 1)*
- *40 km/h on Kauri Crescent (West) between Foster Road and the southern end of Kauri Crescent (West) (Section 2)*

Kauri Crescent (East) and Kauri Crescent (West) are self-explaining roads as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Kauri Crescent was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Kauri Crescent (East) due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (30 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 40 km/h was selected for Kauri Crescent (West) due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 80 km/h on Kauri Crescent in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Kauri Crescent (East) is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (<80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (30 km/h) supports the reduction.

The proposed safe and appropriate speed limit for Kauri Crescent (West) is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Mahana Road (Waimauku)

Mahana Road, Waimauku, is divided into three sections as follows:<sup>1</sup>

- Section 1: Mahana Road between Young Garden Lane and Taha Road
- Section 2: Mahana Road between 375m north of Mahana Road and Young Garden Lane
- Section 3: Mahana Road between Fletcher Road and 375m north of Mahana Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Mahana Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Mahana Road connects to Taha Road to the north and Fletcher Road to the south. This road provides access to residential properties.		
	This section is approximately 0.91 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.5 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.37 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is an unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	on-street parking along this section.	on-street parking along this section.	on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Mahana Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i> dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i> dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i> dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 113 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 113 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 113 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.	This section has a mean operating speed of 37 km/h.	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Taha Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Fletcher Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.91	0.5	0.37
Annual Daily Traffic	113	113	113

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Unsealed	10.00	Two-lane undivided	3.70
Road alignment	Winding	3.50	Straight	1.00	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	1 to <2	1.15
Access density (per km)	5 to <10	1.06	>20	1.30	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.56. For Rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.01. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.05. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 40 km/h on Mahana Road between Young Garden Lane and Taha Road (Section 1)
- 40 km/h on Mahana Road between 375m north of Mahana Road and Young Garden Lane (Section 2)
- 40 km/h on Mahana Road between Fletcher Road and 375m north of Mahana Road (Section 3)

Mahana Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Mahana Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first section of Mahana Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, Winding nature of the road, Severe road-side hazards and low mean operating speed (37 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

A proposed speed limit of 40 km/h was selected for the second section of Mahana Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (37 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

A proposed speed limit of 40 km/h was selected for the third section of Mahana Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (37 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Mahana Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit Mahana Road is 40 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (37 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Matatea Road (Waimauku)

The speed limit on Matatea Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Matatea Road connects to School Road to the west. This road provides access to residential properties.
	This section is approximately 0.74 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Matatea Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 114 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>School Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.74
Annual Daily Traffic	114

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.79
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.79. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Matatea Road.*

Matatea Road is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Matatea Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Matatea Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards, and low mean operating speed (20 km/h). All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 50 km/h on Matatea Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Matatea Road is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (20 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Motu Road (Kumeu)

The speed limit on Motu Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Motu Road connects to Trigg Road to the north and Tawa Road to the south. This road provides access to mixture of residential and commercial properties.</p> <p>This section is approximately 1.73 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Motu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 782 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Trigg Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Tawa Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	0
Corridor Length (km)	1.73
Annual Daily Traffic	782

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.71. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Motu Road.*

Motu Road is a self-explaining road as the mean operating speeds (59 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Motu Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Motu Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (59 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 0 serious, 3 minor, and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Motu Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Muriwai Road (Waimauku / Muriwai)

Muriwai Road, Waimauku / Muriwai, is divided into two sections as follows: <sup>1</sup>

- Section 1: Muriwai Road between SH16 and 140m west of School Road
- Section 2: Muriwai Road between 140m west of School Road and Oaia Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Muriwai Road, Waimauku / Muriwai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Muriwai Road connects to SH16 to the north and Oaia Road to the South. This road provides access to residential properties.	
	This section is approximately 1.06 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 6.8 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities along this road, but no cyclist amenities. There is on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 8 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 8 non-injury crashes. This resulted in 0	WK NZTA's Crash Analysis System (CAS) records 29 crashes between 2016 and 2020: 0 fatal, 1 serious, 12 minor and 16 non-injury crashes. This

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Muriwai Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Muriwai Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as " <i>dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i> "	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6142 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3679 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h between SH1 and School Road, and 100 km/h between School Road and 140m west of School Road.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.	This section has a mean operating speed of 78 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>State Highway 16:</b> 70 km/h</li> <li>• <b>Oaia Road:</b> 50 km/h (proposed 50 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	13
DSI crashes during the period	0	1
Corridor Length (km)	1.06	6.8
Annual Daily Traffic	6142	3679

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2

- The Collective Risk score is 0.03. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 2.19. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80	High	2.28
Adjacent land use	Urban residential	3.00	Rural residential	1.50
Intersection density (per km)	5 to <10	2.60	<1	1.00
Access density (per km)	>20	1.30	2 to <5	1.03
Traffic volume (vpd)	6000 to <12000	2.20	6000 to <12000	2.20

- Section 1
  - The Infrastructure Risk Rating Score is 3.16. For urban areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Muriwai Road between SH16 and 140m west of School Road (Section 1)
- 80 km/h on Muriwai Road between 140m west of School Road and Oaia Road (Section 2)

Muriwai Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Muriwai Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the first section of Muriwai Road due to a multitude of factors. These being the urban land use, medium lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and mean operating speed (55 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 8 crashes in the last 5 years for the first section including 0 fatal, 0 serious, 0 minor, and 8 non-injury crashes.

A proposed speed limit of 80 km/h was selected for the second section of Muriwai Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (78 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

Crash history from NZTA's CAS database shows 29 crashes in the last 5 years for the second section including 0 fatal, 1 serious, 12 minor, and 16 non-injury crashes.

After considering all the above factors, the existing speed limits on Muriwai Road in Waimauku / Muriwai are not considered to be a safe and appropriate speed limit for this road.

The existing speed limit of 50 km/h for the first section is unchanged which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for the second section of Muriwai Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (78 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Muriwai Valley Road (Waimauku / Muriwai)**

Muriwai Valley Road, Waimauku / Muriwai, is divided into two sections as follows: <sup>1</sup>

- Section 1: Muriwai Valley Road between Cable Road and Taiapa Road
- Section 2: Muriwai Valley Road between Taiapa Road and the southeastern end of Muriwai Valley Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Muriwai Valley Road, Waimauku / Muriwai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Muriwai Valley Road connects to Cable Road to the east and Taiapa Road to the west. This road provides access to residential properties.	
	This section is approximately 1.79 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 2.02 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero	WK NZTA's Crash Analysis System (CAS) records zero

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Muriwai Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 358 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 358 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 62 km/h.	This section has a mean operating speed of 31 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Cable Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Taiapa Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.79	2.02
Annual Daily Traffic	358	358

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00
Access density (per km)	5 to <10	1.06	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.70. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.99. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation is 60 km/h for the full length of Muriwai Valley Road.*

Muriwai Valley Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Muriwai Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first section of Muriwai Valley Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (62 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Muriwai Valley Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (31 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Muriwai Valley Road in Waimauku / Muriwai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Nelson Road (Taupaki)

The speed limit on Nelson Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nelson Road connects to Nixon Road to the east and Taupaki Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 1.62 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Nelson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 979 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 66 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Nixon Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Taupaki Road:</b> 60 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.62
Annual Daily Traffic	979

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.71. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Nelson Road.*

Nelson Road is a self-explaining road as the mean operating speeds (66 km/h) is near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Nelson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Nelson Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved nature of the road, high road-side hazards. All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor, and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Nelson Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Nixon Road (Taupaki)

The speed limit on Nixon Road, Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nixon Road connects to Red Hills Road to the south and Taupaki Road to the north. This road provides access to residential properties.</p> <p>This section is approximately 2.71 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 12 crashes between 2016 and 2020: 0 fatal, 2 serious, 6 minor and 4 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Nixon Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 907 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 67 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Taupaki Road:</b> 60 km/h</li> <li><b>Red Hills Road:</b> 80 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	8
DSI crashes during the period	2
Corridor Length (km)	2.71
Annual Daily Traffic	907

- The Collective Risk score is 0.15. For rural areas this corresponds to a Collective Risk band of **Medium-High**
- The Personal Risk score is 44.65. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.39

The Infrastructure Risk Rating Score is 1.91. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Nixon Road.*

Nixon Road is a challenging conversations road as the mean operating speeds (67 km/h) are above the proposed safe and appropriate speeds. Engineering up of Nixon Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Nixon Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and mean operating speed (67 km/h). All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**Medium-High**' and '**High**,' respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 12 crashes in the last 5 years including 0 fatal, 2 serious, 6 minor, and 4 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Nixon Road in Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Oak Valley Road (Dairy Flat)**

The speed limit on Oak Valley Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Oak Valley Road connects to Durey Road to the south. This road provides access to residential properties.
	This section is approximately 0.70 km in length. It is classified as low volume access under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Oak Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as <i>"dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) is 350 vehicle per day determined from Mobile Road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	The mean operating speed on this section is unknown.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Durey Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.70
Annual Daily Traffic	350

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**.

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.15. For rural areas this corresponds to an IRR band of **Medium**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Oak Valley Road.

Engineering up of Oak Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Oak Valley Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, and moderate road-side hazards. All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 50 km/h on Oak Valley Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Oregon Park (Dairy Flat)**

The speed limit on Oregon Park, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Oregon Park connects to Bawden to the south. This road provides access to residential properties.
	This section is approximately 0.34 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Oregon Park were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bawden Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.34
Annual Daily Traffic	62

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Oregon Park.

Oregon Park is a self-explaining road as the mean operating speeds (24 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Oregon Park was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Oregon Park due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (24 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all of the above factors, the existing speed limit of 80 km/h on Oregon Park in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Oregon Park is 60 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (24 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Pioneer Lane (Kumeu)**

The speed limit on Pioneer Lane, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Pioneer Lane connects to Annandale Road to the east. This road provides access to residential properties.
	This section is approximately 0.59 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Pioneer Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 41 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Annandale Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.59
Annual Daily Traffic	41

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Pioneer Lane.

Pioneer Lane is a self-explaining road as the mean operating speeds (26 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Pioneer Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Pioneer Lane due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (26 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Pioneer Lane in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Pomona Road (Kumeu)**

The speed limit on Pomona Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pomona Road connects to Hanham Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 2.24 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Pomona Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 677 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Hanham Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.24
Annual Daily Traffic	677

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.00. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Pomona Road.

Pomona Road is a self-explaining road as the mean operating speeds (58 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Pomona Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Pomona Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (58 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Pomona Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Puke Road (Kumeu)**

The speed limit on Puke Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Puke Road connects to Trigg Road to the north and Tawa Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 2.25 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Puke Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 164 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Trigg Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Tawa Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.25
Annual Daily Traffic	164

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Puke Road.*

Puke Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Puke Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Puke Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (37 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Puke Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed (<80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Red Hills Road (Massey / Taupaki)**

Red Hills Road, Massey / Taupaki, is divided into four sections as follows:<sup>1</sup>

- Section 1: Red Hills Road between Don Buck Road and 375m west of Don Buck Road
- Section 2: Red Hills Road between 375m west of Don Buck Road and 850m east of Sunnyvale Road
- Section 3: Red Hills Road between 850m east of Sunnyvale Road and Sunnyvale Road
- Section 4: Red Hills Road between Sunnyvale Road and Nixon Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Red Hills Road, Massey / Taupaki has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Red Hills Road connects to Don Buck Road to the east and Nixon Road to the west. This road provides access to residential and some commercial properties.		
	This section is approximately 0.38 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.85 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.66 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are pedestrian	This section is a two-way, two-lane, undivided road. There are pedestrian	This section is a two-way, two-lane, undivided road. There are pedestrian

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities and on-street parking along this section. There are no cyclist amenities.	amenities and on-street parking along this section. There are no cyclist amenities.	amenities and on-street parking along this section. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 4 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 12 crashes between 2016 and 2020: 0 fatal, 0 serious, 7 minor and 5 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 4 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Red Hills Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR

Requirement	Comments		
	Section 1	Section 2	Section 3
	defines Urban residential as "dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5696 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 5696 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 2340 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 1.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Red Hills Road connects to Don Buck Road to the east and Nixon Road to the west. This road provides access to residential and some commercial properties.
	This section is approximately 2.07 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 4 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Red Hills Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	Section 4
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2340 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Comment
Current speed limit	<p>The existing speed limit(s) on Red Hills Road are as follows:</p> <ul style="list-style-type: none"> <li>50 km/h between Don Buck Road and 375m west of Don Buck Road (Section 1)</li> <li>70 km/h between 375m west of Don Buck Road and 665m east of Sunnyvale Road (Section 2)</li> <li>80 km/h between 665m east of Sunnyvale Road and 850m east of Sunnyvale Road (Section 2)</li> <li>80 km/h Red Hills Road between 850m east of Sunnyvale Road and Sunnyvale Road (Section 3)</li> <li>80 km/h Red Hills Road between Sunnyvale Road and Nixon Road (Section 4)</li> </ul>
MegaMaps Mean Operating Speed (km/h)	<p>Red Hills Road has a mean operating speed of:</p> <ul style="list-style-type: none"> <li>49 km/h between Don Buck Road and 375m west of Don Buck Road (Section 1)</li> <li>65 km/h between 375m west of Don Buck Road and 850m east of Sunnyvale Road (Section 2)</li> <li>68 km/h Red Hills Road between 850m east of Sunnyvale Road and Sunnyvale Road (Section 3)</li> <li>68 km/h Red Hills Road between Sunnyvale Road and Nixon Road (Section 4)</li> </ul>
Speed limits on adjoining roads	<p>The speed limits in the adjacent road network are:</p> <ul style="list-style-type: none"> <li><b>Don Buck Road:</b> 50 km/h</li> <li><b>Birdwood Road:</b> 60 km/h</li> <li><b>Sunnyvale Road:</b> 80 km/h</li> <li><b>Nelson Road:</b> 80 km/h (proposed SaAS 60 km/h)</li> <li><b>Nixon Road:</b> 80 km/h (proposed SaAS 60 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	7	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.38	0.85	0.66
Annual Daily Traffic	5696	5696	2340
Required Information for safety metrics calculations	Section 4		
Crash Analysis Period (years)	5		
Total injury crashes during period	3		
DSI crashes during the period	0		
Corridor Length (km)	2.07		
Annual Daily Traffic	2340		

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 4
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Winding	3.50	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80	Severe	2.80
Adjacent land use	Urban residential	3.00	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	1 to <2	1.15
Access density (per km)	10 to <20	1.10	>20	1.30	5 to <10	1.06
Traffic volume (vpd)	6000 to <12000	2.20	6000 to <12000	2.20	6000 to <12000	2.20
Feature	Section 4					
	Category	Risk Score				
Road stereotype	Two-lane undivided	3.70				
Road alignment	Winding	3.50				
Carriageway width	Medium lane, Very narrow shoulder	1.79				
Roadside hazards (in both directions)	Severe	2.80				
Adjacent land use	Rural residential	1.50				
Intersection density (per km)	<1	1.00				
Access density (per km)	10 to <20	1.10				

Traffic volume (vpd)	6000 to <12000	2.20
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- Section 1
  - The Infrastructure Risk Rating Score is 2.73. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.51. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.42. For Rural areas this corresponds to an IRR band of **High**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.37. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is

- 40 km/h between Don Buck Road and 375m west of Don Buck Road (Section 1)

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is

- <80 km/h between 375m west of Don Buck Road and 850m east of Sunnyvale Road (Section 2)
- <80 km/h between 850m east of Sunnyvale Road and Sunnyvale Road (Section 3)
- <80 km/h between Sunnyvale Road and Nixon Road (Section 4)

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- (Unchanged) 50 km/h on Red Hills Road between Don Buck Road and 375m west of Don Buck Road (Section 1)
- 60 km/h on Red Hills Road between 375m west of Don Buck Road and 850m east of Sunnyvale Road (Section 2)
- 60 km/h on Red Hills Road between 850m east of Sunnyvale Road and Sunnyvale Road (Section 3)
- (Unchanged) 80 km/h on Red Hills Road between Sunnyvale Road and Nixon Road (Section 4)

The first, second and fourth sections of Red Hills Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. The third section of Red Hills Road is a challenging conversations road as the mean operating speeds are above the proposed safe and appropriate speeds. Engineering up of Red Hills Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

The existing speed limit of 50 km/h is unchanged for the first section of Red Hills Road due to a multitude of factors. These being the urban residential land use, medium lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (49 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the second section of Red Hills Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

A proposed speed limit of 60 km/h was selected for the third section of Red Hills Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

The existing speed limit of 80 km/h is unchanged for the fourth section of Red Hills Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, winding nature of the road, severe road-side hazards and mean operating speed (68 km/hr). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from NZTA's CAS database shows the following crashes in the last 5 years:

- Section 1: 5 crashes including 0 fatal, 0 serious, 1 minor, and 4 non-injury crashes.
- Section 2: 12 crashes including 0 fatal, 0 serious, 7 minor, and 5 non-injury crashes.
- Section 3: 4 crashes including 0 fatal, 0 serious, 0 minor, and 4 non-injury crashes.
- Section 4: 7 crashes including 0 fatal, 0 serious, 3 minor, and 4 non-injury crashes.

After considering all of the above factors, the existing speed limits on Red Hills Road in Massey / Taupaki, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is:

- (Unchanged) 50 km/h for the first section which is aligned with the recommended safe and appropriate speed.
- 60 km/h for the second section which is aligned with the recommended safe and appropriate speed.
- 60 km/h for the third section which is aligned with the recommended safe and appropriate speed because of the future development on the road.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

- (Unchanged) 80 km/h for the fourth section which is higher than the Speed Management Guide recommendation (60 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (68 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Redvale Rise (Redvale)**

The speed limit on Redvale Rise, Redvale has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Redvale Rise connects to East Coast Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 0.27 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Redvale Rise were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>East Coast Road:</b> 80 km/h</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.27
Annual Daily Traffic	52

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Redvale Rise.

Redvale Rise is a self-explaining road as the mean operating speeds (20 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Redvale Rise was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Redvale Rise due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (20 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Redvale Rise in Redvale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – School Road (Waimauku)**

School Road, Waimauku, is divided into three sections as follows: <sup>1</sup>

- Section 1: School Road between northern junction with Muriwai Road and Hinau Road
- Section 2: School Road between Hinau Road and 545m north of southern junction with Muriwai Road
- Section 3: School Road between 545m north of southern junction with Muriwai Road and southern junction with Muriwai Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on School Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	School Road connects to Muriwai Road to the north and south. This road provides access to residential properties.		
	This section is approximately 1.60 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.7 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.55 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of School Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural area with accesses	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 391 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 383 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 383 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45 km/h.	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Muriwai Road (Northern Junction):</b> 50 km/h (proposed 50 km/h)</li> <li>• <b>Muriwai Road (southern Junction):</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Foster Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Hinau Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	1	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.60	1.7	0.55
Annual Daily Traffic	391	383	383

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Tortuous	60	Tortuous	6.00	Tortuous	6.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	Severe	2.80	Severe	2.80
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15	1 to <2	1.15
Access density (per km)	5 to <10	1.06	10 to <20	1.10	2 to <5	1.03
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.26. For Rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.32. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.30. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on School Road between northern junction with Muriwai Road and Hinau Road (Section 1)
- 60 km/h on School Road between Hinau Road and 545m north of southern junction with Muriwai Road (Section 2)
- 60 km/h on School Road between 545m north of southern junction with Muriwai Road and southern junction with Muriwai Road (Section 3)

School Road is a self-explaining road as the mean operating speeds (45-50 km/h) are below the proposed safe and appropriate speeds, despite the existing 80-100 km/h speed limit. Engineering up of School Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would outweigh any benefits.

A proposed speed limit of 60 km/h was selected for all three sections of School Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, tortuous nature of the road, high-severe road-side hazards and low mean operating speed (45-50 km/hr). All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years for the second section including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.

WK NZTA's Crash Analysis System (CAS) records zero crash on the first and third section of School Road between 2016 and 2020.

After considering all the above factors, the existing speed limit of 80 km/h on School Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for all sections of School Road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Station Road (Kumeu)

The speed limit on Station Road, Kumeu, between 100m South of Nobilo Road and Tawa Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Station Road connects to Tawa Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 0.44 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Station Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 601 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 57 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tawa Road:</b> 80 km/h</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.44
Annual Daily Traffic	601

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.288
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.46. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the Station Road, between 100m South of Nobilo Road and Tawa Road.

Station Road is a self-explaining road as the mean operating speeds (57 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Station Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Station Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (57 km/h). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all the above factors, the existing speed limit of 80 km/h on Station Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Station Road is 60 km/h which is the speed limit recommended by the Speed Management Guide (<80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed (57 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – Taha Road (Waimauku)**

Taha Road, Waimauku, is divided into three sections as follows: <sup>1</sup>

- Section 1: Taha Road between Fletcher Road and 500m north of Fletcher Road
- Section 2: Taha Road between 500m north of Fletcher Road and 20m north of Mahana Road
- Section 3: Taha Road between 20m north of Mahana Road and Muriwai Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Taha Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Taha Road connects to Muriwai Road to the north and Fletcher Road to the south. This road provides access to residential and commercial properties.		
	This section is approximately 0.5 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.5 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.89 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Taha Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private</i>	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private</i>	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private</i>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>dwelling and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1035 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1035 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1035 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 46 km/h.	This section has a mean operating speed of 47 km/h.	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Muriwai Road:</b> 100 km/h (proposed 80 km/h)</li> <li>• <b>Mahana Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Fletcher Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	1
DSI crashes during the period	0	0	0
Corridor Length (km)	0.5	0.5	0.89
Annual Daily Traffic	1035	1035	1035

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Tortuous	6.00	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	1 to <2	1.15
Access density (per km)	>20	1.30	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.68. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.38. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.86. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all three sections.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Taha Road between Fletcher Road and 500m north of Fletcher Road (Section 1)
- 60 km/h on Taha Road between 500m north of Fletcher Road and 20m north of Mahana Road (Section 2)
- 60 km/h on Taha Road between 20m north of Mahana Road and Muriwai Road (Section 3)

Taha Road is a self-explaining road as the mean operating speeds (46-59 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Taha Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for all sections of Taha Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight-tortuous nature of the road, high road-side hazards and low mean operating speed (46-59 km/hr). All of these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Taha Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for all sections of Taha Road which is aligned with the recommended safe and appropriate speed (<80 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Taiapa Road (Muriwai)**

Taiapa Road, Muriwai, is divided into three sections as follows: <sup>1</sup>

- Section 1: Taiapa Road between Muriwai Valley Road and 1020m southwest of Muriwai Valley Road
- Section 2: Taiapa Road between 1020m southwest of Muriwai Valley Road and 45m north of Taiapa Valley Road
- Section 3: Taiapa Road between 45m north of Taiapa Valley Road and Constable Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Taiapa Road, Muriwai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Taiapa Road connects to Muriwai Valley Road to the north and Oaia Road to the south. This road provides access to residential properties.		
	This section is approximately 1.02 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.72 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.03 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no	This section is a road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Taiapa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR

Requirement	Comments		
	Section 1	Section 2	Section 3
	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 262 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 289 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 141 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 64 km/h.	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 52 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Muriwai Valley Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Oaia Road:</b> 60 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.02	1.72	1.03
Annual Daily Traffic	262	289	141

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Unsealed	10.00	Two-lane undivided	3.70
Road alignment	Curved	1.80	Tortuous	6.00	Tortuous	6.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Severe	2.80	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00	2 to <3	1.25
Access density (per km)	5 to <10	1.06	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.64. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.75. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.32. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all sections of Taiapa Road.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Taiapa Road between Muriwai Valley Road and 1020m southwest of Muriwai Valley Road
- 60 km/h on Taiapa Road between 1020m southwest of Muriwai Valley Road and 45m north of Taiapa Valley Road
- 60 km/h on Taiapa Road between 45m north of Taiapa Valley Road and Constable Road

Taiapa Road is a self-explaining road as the mean operating speeds (50-64 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Taiapa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first and third sections of Taiapa Road due to a multitude of factors. These being the narrow to medium lane width, very narrow shoulder width, curved to tortuous nature of the road, high road-side hazards and low mean operating speed (52-64 km/hr). All of these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years for the first section including 0 fatal, 0 serious, 1 minor, and 1 non-injury crashes.

A proposed speed limit of 60 km/h was selected for the second section of Taiapa Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards, and low mean operating speed (50 km/hr). All these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all the above factors, the existing speed limit of 100 km/h on Taiapa Road in Muriwai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for all sections of Taiapa Road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Tawa Road (Kumeu)**

Tawa Road, Kumeu, is divided into three sections as follows: <sup>1</sup>

- Section 1: Tawa Road between Station Road and 950m southwest of Station Road
- Section 2: Tawa Road between 950m southwest of Station Road and 1460m southwest of Station Road
- Section 3: Tawa Road between 1460m southwest of Station Road and 2000m southwest of Station Road
- Section 4: between 2000m southwest of Station Road and Annandale Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Tawa Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Tawa Road connects to Access Road to the north and Annadale Road and Hanham Road to the south. This road provides access to residential properties.		
	This section is approximately 0.95 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.51 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.54 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road.	This section is a two-way, two-lane, undivided road.	This section is a two-way, two-lane, undivided road.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 2 serious, 1 minor and 2 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Tawa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR

Requirement	Comments		
	Section 1	Section 2	Section 3
	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 941 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 941 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 941 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 1.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
	<b>Section 4</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tawa Road connects to Access Road to the north and Annadale Road and Hanham Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.54 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crash. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Tawa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<b>Section 4</b>
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 941 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2.1: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 70 km/h.	This section has a mean operating speed of 66 km/h.	This section has a mean operating speed of 66 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Access Road:</b> 80 km/h (proposed 80 km/h)</li> <li><b>Station Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Annandale Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Hanham Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>		

AT also had regard to	Section 4
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Access Road:</b> 80 km/h (proposed 80 km/h)</li> <li><b>Station Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Annandale Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Hanham Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	5	2	1
DSI crashes during the period	2	1	0
Corridor Length (km)	0.95	0.51	0.54
Annual Daily Traffic	941	941	941
Required Information for safety metrics calculations	Data		
	Section 4		
Crash Analysis Period (years)	5		
Total injury crashes during period	1		
DSI crashes during the period	0		
Corridor Length (km)	1.54		
Annual Daily Traffic	941		

- Section 1
  - The Collective Risk score is 0.42. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 122.6. For rural areas this corresponds to a Personal Risk band of **High**
- Section 2
  - The Collective Risk score is 0.39. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 114.2. For rural areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 4
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80	Severe	2.80
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15	1 to <2	1.15
Access density (per km)	>20	1.30	10 to <20	1.10	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00
Feature	Section 4					
	Category	Risk Score				
Road stereotype	Two-lane undivided	3.70				
Road alignment	Winding	3.50				
Carriageway width	Medium lane, Narrow shoulder	1.45				
Roadside hazards (in both directions)	Severe	2.80				
Adjacent land use	Rural residential	1.50				
Intersection density (per km)	1 to <2	1.15				
Access density (per km)	10 to <20	1.10				

Traffic volume (vpd)	<1000	1.00
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- Section 1
  - The Infrastructure Risk Rating Score is 1.56. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.45. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.45. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.00. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 80 km/h on Tawa Road between Station Road and 1460m southwest of Station Road (Section 1 & 2)–*unchanged*
- 60 km/h on Tawa Road between 1460m southwest of Station Road and Annandale Road (Section 3 & 4)

Tawa Road is a self-explaining road as the mean operating speeds are below the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Tawa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for the first and second sections of Tawa Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, straight nature of the road, severe road-side hazards and mean operating speed (66-70 km/h). All of these factors contribute to the road's 'Medium' IRR score. Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the third section of Tawa Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, straight nature of the road, severe road-side hazards and mean operating speed (66 km/h). All of these factors contribute to the road's 'Medium' IRR score.

A proposed speed limit of 60 km/h was selected for the fourth section of Tawa Road due to a multitude of factors. These being the medium lane width, narrow shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (58 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

Crash history from NZTA's CAS database shows the following for the last 5 years:

- Section 1: 5 crashes including 0 fatal, 2 serious, 1 minor, and 2 non-injury crashes.
- Section 2: 2 crashes including 0 fatal, 1 serious, 1 minor, and 0 non-injury crashes.
- Section 3: 1 crash including 0 fatal, 0 serious, 1 minor, and 0 non-injury crashes.
- Section 4: 1 crash including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

After considering all the above factors, the existing speed limit on Tawa Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for the first and second sections of Tawa Road is to keep the existing 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (70 km/h).

The proposed safe and appropriate speed limit is 60 km/h for the third and fourth sections of Tawa Road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Top Road (Dairy Flat)

The speed limit on Top Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Top Road connects to Bawden Road to the south. This road provides access to residential properties.
	This section is approximately 1.39 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Top Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 108 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 48 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bawden Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.39
Annual Daily Traffic	108

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.06. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Top Road.*

Top Road is a self-explaining road as the mean operating speeds (48 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Top Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Top Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, winding nature of the road, high road-side hazards and low mean operating speed (48 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor, and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Top Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Trigg Road (Kumeu / Huapai)

Trigg Road, Kumeu / Huapai, is divided into three sections as follows:<sup>1</sup>

- Section 1: Trigg Road between Puke Road and Foster Road
- Section 2: Trigg Road between 600m south of State Highway 16 and Puke Road
- Section 3: Trigg Road between State Highway 16 and 600m south of State Highway 16

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Trigg Road, Kumeu / Huapai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Trigg Road connects to State Highway 16 to the east and Foster Road to the west. This road provides access to residential properties.		
	This section is approximately 0.47 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.34 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.60 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no	This section is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	on-street parking along this section.	on-street parking along this section.	are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 6 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 5 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Trigg Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as "rural	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural residential as "rural	The adjacent land use is classified as Urban residential using on-site information and geomaps. The IRR defines Urban residential as

Requirement	Comments		
	Section 1	Section 2	Section 3
	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	"dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1006 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1006 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 1006 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 60 km/h.	This section has a mean operating speed of 60 km/h.	This section has a mean operating speed of 46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>State Highway 16:</b> 60 km/h</li> <li>• <b>Motu Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Puke Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Foster Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.47	1.34	0.60
Annual Daily Traffic	1006	1006	1006

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Curved	1.80	Winding	3.50	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	Severe	2.80
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Urban residential	3.00
Intersection density (per km)	3 to <5	1.50	1 to <2	1.15	3 to <5	1.50
Access density (per km)	5 to <10	1.06	10 to <20	1.10	>20	1.30
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.96. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.15. For Rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.44. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for the first and second sections of Trigg Road.

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h for the third section of Trigg Road.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Trigg Road between Puke Road and Foster Road (Section 1)
- 60 km/h on Trigg Road between 600m south of State Highway 16 and Puke Road (Section 2)
- (Unchanged) 50 km/h on Trigg Road between State Highway 16 and 600m south of State Highway 16 (Section 3)

Trigg Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Trigg Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for the first and second sections of Trigg Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, curved to winding nature of the road, high road-side hazards and low mean operating speed (60 km/hr). All of these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows 6 crashes in the last 5 years for the first section including 0 fatal, 0 serious, 1 minor, and 5 non-injury crashes.

The speed limit is unchanged (50 km/h) for the third section of Trigg Road due to a multitude of factors. These being the urban residential land use, medium lane width, very narrow shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (46 km/hr). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.

After considering all the above factors, the existing speed limits on Trigg Road in Kumeu / Huapai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h for the first and second sections of Trigg Road which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for the third section of Trigg Road is 50 km/h which is higher than the Speed Management Guide recommendation (40 km/h) but are considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to existing operating speeds (46 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Trotting Course Drive (Kumeu)

The speed limit on Trotting Course Drive, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Trotting Course Drive connects to Waitakere Road to the west. This road provides access to commercial properties.
	This section is approximately 0.31 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Trotting Course Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and Very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Waitakere Road:</b> 80 km/h (proposed 80 km/h)</li> <li><b>Boord Crescent:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.31
Annual Daily Traffic	70

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.27. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Trotting Course Drive.*

Trotting Course Drive is a self-explaining road as the mean operating speeds (23 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Trotting Course Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Trotting Course Drive due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (23 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor, and 1 non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Trotting Course Drive in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Trotting Course Drive is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide, this is considered appropriate based on the function of the road and the mean operating speed (23 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Valley Road (Waimauku)

Valley Road, Waimauku, is divided into three sections as follows:<sup>1</sup>

- Section 1: Valley Road between Muriwai Valley Road and 1030m southeast of Muriwai Valley Road
- Section 2: Valley Road between 1030m southeast of Muriwai Valley Road and southeastern end of Valley Road
- Section 3: Valley Road between Muriwai Road and Muriwai Valley Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Valley Road, Waimauku has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Valley Road connects to Muriwai Road to the north. This road provides access to residential properties.		
	This section is approximately 1.03 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.45 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.5 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is an unsealed road. There are no pedestrian or cyclist amenities along this	This section is an unsealed road. There are no pedestrian or cyclist amenities along this	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	road, and there is no on-street parking along this section.	road, and there is no on-street parking along this section.	amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and

Requirement	Comments		
	Section 1	Section 2	Section 3
	<i>cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>	<i>cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 255 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 255 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 41 km/h.	This section has a mean operating speed of 26 km/h.	This section has a mean operating speed of 53 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Muriwai Road:</b> 100 km/h (proposed 80 km/h)</li> <li><b>Muriwai Valley Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Cable Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.03	0.45	0.5
Annual Daily Traffic	255	62	255

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.00	Unsealed	10.00	Two-lane undivided	3.70
Road alignment	Curved	1.80	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00	3 to <5	1.50
Access density (per km)	10 to <20	1.10	10 to <20	1.10	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00	<1000	1.00	<1000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.08. For Rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.83. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.56. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all sections of Valley Road.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 40 km/h on Valley Road between Muriwai Valley Road and 1030m southeast of Muriwai Valley Road (Section 1)
- 40 km/h on Valley Road between 1030m southeast of Muriwai Valley Road and south-eastern end of Valley Road (Section 2)
- 60 km/h on Valley Road between Muriwai Road and Muriwai Valley Road (Section 3)

Valley Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. Engineering up of Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for the first and second section of Valley Road due to a multitude of factors. These being the unsealed road surface, medium lane width, very narrow shoulder width, Straight to Curved nature of the road, High road-side hazards and low mean operating speed (26-41 km/hr). All of these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for the third section of Valley Road due to a multitude of factors. These being the medium lane width, very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (53 km/hr). All of these factors contribute to the road's 'Medium' IRR score, making it a Medium-risk road.

After considering all the above factors, the existing speed limits on Valley Road in Waimauku, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for the first and second sections of Valley Road is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (26-41 km/h) supports the reduction.

The proposed safe and appropriate speed limit for the third section of Valley Road is 60 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (53 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Waitakere Road (Waitakere)

Waitakere Road, Waitakere, is divided into five sections as follows:<sup>1</sup>

- Section 1: Waitakere Road between Swanson Road and 220m south of Township Road
- Section 2: Waitakere Road between 220m south of Township Road and 190m north of Bethells Road
- Section 3: Waitakere Road between 190m north of Bethells Road and Taupaki Road
- Section 4: Waitakere Road between Taupaki Road and 840m south of Hanham Road
- Section 5: Waitakere Road between 840m south of Hanham Road and Access Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Waitakere Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1.1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Waitakere Road connects to Access Road to the north and to Swanson Road and Scenic Drive North to the south. This road provides access to rural residential properties.		
	This section is approximately 2.54 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.56 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 3.05 km in length. It is classified as an Arterial road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on this section of road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 21 crashes between 2016 and 2020: 1 fatal, 1 serious, 7 minor and 12 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 3 non-injury crashes between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 13 crashes between 2016 and 2020: 1 fatal, 1 serious, 2 minor and 9 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Waitakere Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Waitakere Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5,384 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 5,278 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 2,976 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 2.2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 4	Section 5
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Waitakere Road connects to Access Road to the north and to Swanson Road and Scenic Drive North to the south. This road provides access to rural residential properties.	
	This section is approximately 1.7 km in length. It is classified as a Arterial road under the one network road classification (ONRC).	This section is approximately 4.57 km in length. It is classified as a Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 8 crashes between 2016 and 2020: 0 fatal, 1 serious, 2 minor and 5 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 9 crashes between 2016 and 2020: 0 fatal, 2 serious, 2 minor and 5 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Waitakere Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Waitakere Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	

Requirement	Comments	
	Section 4	Section 5
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as "rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2405 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 2405 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 3.1: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 70 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 66 km/h.	This section has a mean operating speed of 65 km/h.	This section has a mean operating speed of 76 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Scenic Drive North:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Swanson Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Kay Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Township Road:</b> 70 km/h (proposed 50 km/h)</li> <li>• <b>Bethells Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>		

Table 4.2: Additional Relevant Factors

AT also had regard to	Section 4	Section 5
Current speed limit	The existing speed limit is 60 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 76 km/h.	This section has a mean operating speed of 68 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Taupaki Road:</b> 60 km/h</li> <li>• <b>Cottle Road:</b> 60 km/h</li> <li>• <b>Hunter Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Hanham Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Access Road:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	9	0	4
DSI crashes during the period	2	0	2
Corridor Length (km)	2.54	0.56	3.05
Annual Daily Traffic	5,384	5,278	2,976

	Section 4	Section 5
Crash Analysis Period (years)	5	5
Total injury crashes during period	3	4
DSI crashes during the period	1	2
Corridor Length (km)	1.7	4.57
Annual Daily Traffic	2405	2405

- Section 1
  - The Collective Risk score is 0.16. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 8.0. For rural areas this corresponds to a Personal Risk band of **Medium-High**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.13. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 12.1. For rural areas this corresponds to a Personal Risk band of **High**
- Section 4
  - The Collective Risk score is 0.12. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 13.43. For rural areas this corresponds to a Personal Risk band of **High**
- Section 5
  - The Collective Risk score is 0.09. For rural areas this corresponds to a Collective Risk band of **Medium**
  - The Personal Risk score is 9.96. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	<1	1.00	3 to <5	1.50	<1	1.00
Access density (per km)	2 to <5	1.03	5 to <10	1.06	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 4		Section 5	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.70	Two-lane undivided	3.70
Road alignment	Straight	1.00	Curved	1.80
Carriageway width	Medium lane, Very narrow shoulder	1.79	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural residential	1.50	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00

Access density (per km)	>20	1.30	10 to <20	1.10
Traffic volume (vpd)	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.77. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.77. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 4
  - The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 5
  - The Infrastructure Risk Rating Score is 1.80. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h for all sections of Waitakere Road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is:*

- 60 km/h on Waitakere Road Name between Swanson Road and 190m north of Bethells Road (Sections 1 and 2)
- 80 km/h on Waitakere Road between 190m north of Bethells Road and Taupaki Road (Section 3)
- 60 km/h on Waitakere Road between Taupaki Road and 840m south of Hanham Road (Section 4)
- 80 km/h on Waitakere Road between 840m south of Hanham Road and Access Road (Section 5)

Waitakere Road between Swanson Road and 190m north of Bethells Road is a self-explaining road as the mean operating speeds (65 to 66 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h and 80 km/h speed limits respectively. Engineering up of Waitakere Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Waitakere Road between Swanson Road and 190m north of Bethells Road (Sections 1 and 2) due to a multitude of factors. These included the curved road alignment, high roadside hazards, and mean operating speed of 65 to 66 km/h. These factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 24 crashes in the last 5 years on this section of road including 1 fatal, 1 serious, 7 minor and 15 non-injury crashes.

It is proposed to maintain the 80 km/h speed limit for the section of Waitakere Road between 190m north of Bethells Road and Taupaki Road despite this being higher than the Speed Management Guide recommendation (<80 km/h). This is considered appropriate based on the nature and function of the road, and a lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (76 km/h).

It is proposed to maintain the 60 km/h speed limit for the section of Waitakere Road between Taupaki Road and 840m south of Hanham Road which is aligned with the recommended safe and appropriate speed.

It is proposed to maintain the 80 km/h speed limit for the section of Waitakere Road between 840m south of Hanham Road and Access Road despite this being higher than the Speed Management Guide recommendation (<80 km/h). This is considered appropriate based on the nature and function of the road, and a lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (68 km/h).

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Wilson Road (Dairy Flat)

The speed limit on Wilson Road, Dairy Flat has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Wilson Road connects to Bawden Road to the north. This road provides access to residential properties.
	This section is approximately 0.93 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Wilson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 201 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bawden Road:</b> 80 km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (km)	0.93
Annual Daily Traffic	201

- The Collective Risk score is 0.22. For rural areas this corresponds to a Collective Risk band of **High**
- The Personal Risk score is 293.13. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, Very narrow shoulder	2.00
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 1.76. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Wilson Road.*

Wilson Road is a self-explaining road as the mean operating speeds (46 km/h) are below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Wilson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Wilson Road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width, curved nature of the road, high road-side hazards and low mean operating speed (46 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high risk road.<sup>1</sup> Due to adverse crash history on the road, the collective and personal risk of this road are classified as '**High**' and '**High**', respectively, due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.

Crash history from NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 1 serious, 0 minor, and 0 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Wilson Road in Dairy Flat, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Worrall Road (Kumeu)

The speed limit on Worrall Road, Kumeu has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Worrall Road connects to Awa Road to the north. This road provides access to residential properties.
	This section is approximately 1.22 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Worrall Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using on-site information and geomaps. The IRR defines Rural residential as " <i>rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 80 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 29 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Awa Road:</b> 100 km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.22
Annual Daily Traffic	80

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1000	1.00

The Infrastructure Risk Rating Score is 2.73. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Worrall Road.*

Worrall Road is a self-explaining road as the mean operating speeds (29 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Worrall Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Worrall Road due to a multitude of factors. These being the unsealed road surface, narrow lane width, very narrow shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speed (29 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Worrall Road in Kumeu, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Worrall Road is 40 km/h which aligns with the speed limit recommended by the Speed Management Guide (<80 km/h); this is considered appropriate based on the function of the road and the mean operating speed (29 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Albert Crescent (Ostend)

The speed limit on Albert Crescent, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Albert Crescent connects to Ostend Road to the north. This road provides access to residential properties and the Te Ara Hura walking network. Albert Crescent is approximately 0.5 km in length.</p> <p>Albert Crescent is classified as an Secondary Collector road under the one network road classification (ONRC). Albert Crescent is a two-way, two-lane undivided road. There are no pedestrian and/or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Albert Crescent were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Albert Crescent is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Albert Crescent has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ostend Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	500
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.12. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Albert Crescent.*

Albert Crescent is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Albert Crescent was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Albert Crescent due to a multitude of factors. These being the narrow and curved nature of the road, the High roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Albert Crescent in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Albert Crescent, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Alison Road (Surfdale)

Alison Road, Surfdale, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Alison Road between Mitchell Road and Donald Bruce Road
2. Section 2: Alison Road between Miami Avenue and Mitchell Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Alison Road, Surfdale have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Alison Road connects to Mitchell Road to the west and Donald Bruce Road and Causeway Road to the south. This road provides access to residential properties.	Alison Road connects to Miami Avenue to the west and Mitchell Road to the south. This road provides access to residential properties.
	This section of Alison Road is 0.31km in length. It is classified as an Arterial road under the one network road classification (ONRC). Alison Road is a two-lane undivided road.	This section of Alison Road is 0.3km in length. It is classified as an Arterial road under the one network road classification (ONRC). Alison Road is two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities including footpaths and a pedestrian refuge island and a cycle lane.	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes.
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	for all road users and therefore the crash risk for all road users was considered. CAS records 6 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 5 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Alison Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Alison Road is as follows: <ul style="list-style-type: none"> <li>50km/h Between Mitchell Road and Donald Bruce Road</li> <li>50km/h Between Miami Avenue and Mitchell Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Alison Road are as follows: <ul style="list-style-type: none"> <li>44.81km/h Between Mitchell Road and Donald Bruce Road</li> <li>44.81km/h Between Miami Avenue and Mitchell Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Mitchell Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Miami Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Bryan Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Donald Bruce Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Jellicoe Parade:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Kennedy Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Causeway Road</b> 50km/h (proposed 50kmh)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	0	0
Corridor Length (m)	310	300
Annual Daily Traffic (vpd)	520	520

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Mitchell Road and Donald Bruce Road (Section 1),
- 40km/h Between Miami Avenue and Mitchell Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50km/h on Between Mitchell Road and Donald Bruce Road (Section 1),
- 30km/h on Between Miami Avenue and Mitchell Road (Section 2).

Alison Road between Mitchell Road and Donald Bruce Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. A proposed speed limit of 50km/h was selected, for Section 1 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Arterial function and its existing mean operating speed (44.81km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 6 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 5 non-injury crashes.

Alison Road Between Miami Avenue and Mitchell Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Arterial function and its existing mean operating speed (44km/h). These features also contribute to the roads "Medium" IRR score. The centreline is non-continuous and there is roadside parking making the corridor different to Section 1. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) on Alison Road in Surfdale, are not considered to be a safe and appropriate speed limit for this road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, supports the secondary nature of this section of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Anzac Road (Waiheke Island)

Anzac Road, Waiheke Island, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Anzac Road Between Orapiu Road and Hunterville Road
2. Section 2: Anzac Road Between Orapiu Road and Nepean Avenue

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Anzac Road, Waiheke Island has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Anzac Road connects to Orapiu Road to the north and Nepean Avenue to the west. This road provides access to residential properties.	
	This section is approximately 0.52km in length. This section of Anzac Road is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.8km in length. This section of Anzac Road is classified as an Access road under the one network road classification (ONRC).
	This section is a Two-lane undivided road.	This section is Unsealed.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	Both sections of road provide access to residential properties. There are no footpaths and/or cycle lanes.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records zero crashes between 2016 and 2020. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Anzac Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Severe</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Severe</p>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".	
	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> </ul> <p><b>Access density:</b> 10 to &lt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> </ul> <p><b>Access density:</b> 10 to &lt;20</p>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as	Average daily traffic (ADT) was determined from MegaMaps as

Requirement	Comments	
	Section 1	Section 2
	55 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	55 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Anzac Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Orapiu Road and Hunterville Road</li> <li>50km/h Between Orapiu Road and Nepean Avenue</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Anzac Road are as follows: <ul style="list-style-type: none"> <li>21km/h Between Orapiu Road and Hunterville Road</li> <li>20km/h Between Orapiu Road and Nepean Avenue</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Orapiu Road:</b> 80km/h (proposed 60km/h)</li> <li><b>Nepean Road:</b> 50km/h (proposed 40km/h)</li> <li><b>Neil Avenue:</b> 50km/h (proposed 40km/h)</li> <li><b>Hunterville Road:</b> 50km/h (proposed 40km/h)</li> <li><b>Wallingford Avenue:</b> 50km/h (proposed 40km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	0	0
Corridor Length (m)	520	800
Annual Daily Traffic	<1000	<1000

- Section 1
  - The Collective Risk band is 0. For Rural areas this corresponds to a Collective Risk score of **Low**.
  - Personal Risk score is 0 and a Personal Risk band is **Low**.
- Section 2
  - The Collective Risk score is **Low**. For Rural areas this corresponds to a Collective Risk band of 0.
  - Personal Risk score is **Low**. A Personal Risk band of 0.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Unsealed	10
Road alignment	Tortuous	6	Tortuous	6
Carriageway width (road lane + shoulder)	Narrow, Very narrow	2.01	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5	3 to <5	1.5
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	55vpd	1	55vpd	1

- Section 1: The Infrastructure Risk Rating Score is 2.4. For Rural areas this corresponds to an IRR band of **High**.
- Section 2: The Infrastructure Risk Rating Score is 2.9. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80km/h Between Orapiu Road and Hunterville Road (Section 1),
- <80km/h Between Orapiu Road and Nepean Avenue (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 40km/h Between Orapiu Road and Hunterville Road (Section 1),
- 40km/h Between Orapiu Road and Nepean Avenue (Section 2).

Anzac Road, Between Orapiu Road and Hunterville Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected, for Section 1, due to a multitude of factors. These being the Narrow and Tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (21.21km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as 'Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Anzac Road Between Orapiu Road and Nepean Avenue, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 1 due to a multitude of factors. These being Narrow and Tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>3</sup>. The collective and personal risk of this road are classified as 'Low and Low due to the number of DSI crashes.

After considering all the above factors, the existing speed limits on Anzac Road in Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limits for both sections of Anzac Road is 40km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Awaawaroa Road (Waiheke Island)

The speed limit on Awaawaroa Road, Waiheke Island has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Awaawaroa Road connects to Man O War Bay Road to the north, Waiheke Road to the west and Orapiu Road to the east. This road provides access to rural residential properties.
	Awaawaroa Road is approximately 2.5km in length. Awaawaroa Road is classified as an Access road under the one network road classification (ONRC).
	Awaawaroa Road is Two-lane undivided. There are no footpaths, cycle lanes or on-street parking provided.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Awaawaroa Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage. The IRR defines Remote rural as <i>"Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry"</i> .
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2</li> <li><b>Access density:</b> 5 to &lt;10</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 226 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Awaawaroa Road is 80km/h.
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Awaawaroa Road is 33.49km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Waiheke Road:</b> 50km/h (proposed 60km/h)</li> <li><b>Man O War Bay Road:</b> 80km/h (proposed 40km/h)</li> <li><b>Orapiu Road:</b> 80km/h (proposed 60km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	2300
Annual Daily Traffic	226

The Collective Risk band is **Low**. For Rural areas this corresponds to a Collective Risk score of 0. Personal Risk band is **Low**. A Personal Risk score of 0.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width (road lane + shoulder)	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Remote rural	1
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume	226	1

The Infrastructure Risk Rating Score is 1.9. For Rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Awaawaroa Road*

Awaawaroa Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected due to a multitude of factors. These being Narrow and Winding nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (33.49km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as 'Low and Low respectively due to the number of DSI crashes, making it a high-risk road<sup>1</sup>.

After considering all the above factors, the existing speed limit(s) on Awaawaroa Road in Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limits for Awaawaroa Road is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Bay Road (Ostend)

The speed limit on Bay Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bay Road connects to Hill Road to the north and Wharf Road to the south. This road provides access to residential properties. Bay Road is approximately 0.78 km in length.</p> <p>Bay Road is classified as an Secondary Collector road under the one network road classification (ONRC). Bay Road is Two-lane undivided. There are no pedestrian and/or cyclist amenities along the majority of this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bay Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 789 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (789vpd).
(i) any planned modification to the road; and	Modification/engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Bay Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Bay Road has a mean operating speed in the range of 34.97 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hill Road:</b> 50km/h (40km/h proposed)</li> <li><b>Wharf Road:</b> 50km/h (50km/h proposed)</li> <li><b>Crescent Road East:</b> 50km/h (30km/h proposed)</li> <li><b>Crescent Road West:</b> 50km/h (30km/h proposed)</li> <li><b>Giles Road:</b> 50km/h (30km/h proposed)</li> <li><b>Te Toki Road:</b> 50km/h (40km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	780
Annual Daily Traffic (vpd)	789

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	789	1

The Infrastructure Risk Rating Score is 2.12. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Bay Road.*

A proposed speed limit of 30km/h was selected for Bay Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (34.97km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Bay Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bay Road, the actual operating speeds from the MegaMaps tool are 35km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beach Parade (Oneroa)

The speed limit on Beach Parade, Oneroa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beach Parade connects to Puriri Road to the east. This road provides access to residential properties and the beach. Beach Parade is approximately 0.65 km in length.</p> <p>Beach Parade is classified as an Secondary Collector road under the one network road classification (ONRC). Beach Parade is a two-lane, undivided road. No pedestrian and/or cyclist amenities along this road, however, there is a high pedestrian presence due to the beach access.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beach Parade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 48 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (48vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Beach Parade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Beach Parade has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Puriri Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	650
Annual Daily Traffic (vpd)	48

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.3
Traffic volume	48	1

The Infrastructure Risk Rating Score is 1.63. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Beach Parade.*

Beach Parade is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Beach Parade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Beach Parade due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Beach Parade in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Beach Parade, the actual operating speeds from the MegaMaps tool is 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beatty Parade (Surfdale)

The speed limit on Beatty Parade, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beatty Parade connects to Beresford Avenue / George Street to the north and Hamilton Road to the south. This road provides access to industrial and residential areas. Beatty Parade is approximately 0.5 km in length.</p> <p>Beatty Parade is classified as an Secondary Collector road under the one network road classification (ONRC). Beatty Parade is two-lane undivided. There are no footpaths, no cycle lanes, and on-street parking is partially allowed along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 1 non-injury crashes. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beatty Parade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Beatty Parade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Beatty Parade has a mean operating speed in the range of 36.96 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Beresford Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>George Street:</b> 50km/h (30km/h proposed)</li> <li><b>Hamilton Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

From MegaMaps and/or on-site information assessment **Beatty Parade** has the following information:

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	500
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Narrow	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 1.74. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Beatty Parade.*

A proposed speed limit of 30km/h was selected for Beatty Parade due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (36.96km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as 'Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Beatty Parade in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Beatty Parade, the mean operating speeds from the MegaMaps tool is 37km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Belgium Street (Ostend)

The speed limit on Belgium Street, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Belgium Street connects to Wharf Road to the Ostend Road to the east. This road provides access to the nearby shops. Belgium Street is approximately 0.38 km in length.</p> <p>Belgium Street is classified as an Arterial road under the one network road classification (ONRC). Belgium Street is two-lane undivided. There are footpaths and on-street parking is occasionally allowed along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Belgium Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using the drive over footage and the MegaMaps tool. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,367 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (8,573vpd).
(i) any planned modification to the road; and	Modification/engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Belgium Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Belgium Street has a mean operating speed in the range of 46.19 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wharf Road:</b> 50km/h (30km/h proposed)</li> <li><b>Ostend Road:</b> 50km/h (30km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	380
Annual Daily Traffic (vpd)	9,367

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial big box	4
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	9367	2.2

The Infrastructure Risk Rating Score is 2.71. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Belgium Street.*

A proposed speed limit of 30km/h was selected for Belgium Street due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Arterial function and the high number of active road users. These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as "Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Belgium Street in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Belgium Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bella Vista Road (Ōmiha)

The speed limit on Bella Vista Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Bella Vista Road connects to Fairview Crescent to the north and Upland Road to the south. This road provides access to residential areas. Bella Vista Road is approximately 0.65 km in length.
	Bella Vista Road is classified as an Access road under the one network road classification (ONRC). Bella Vista Road is unsealed. There are no footpaths, cycle lanes and on-street parking along this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bella Vista Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 44 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (44).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Bella Vista Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bella Vista Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Fairview Crescent:</b> 50km/h (30km/h proposed)</li> <li><b>Upland Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	650
Annual Daily Traffic (vpd)	44

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	44	1

The Infrastructure Risk Rating Score is 3.01. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Bella Vista Road.*

Bella Vista Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Bella Vista Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Bella Vista Road due to a multitude of factors. These being the narrow and winding nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Bella Vista Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bella Vista Road, the actual operating speeds from the MegaMaps tool is 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Belle Terrace (Waiheke Island)

The speed limit on Belle Terrace, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Belle Terrace connects to Waiheke Road to the west and east. This road provides access to residential areas. Belle Terrace is approximately 0.78 km in length.
	Belle Terrace is classified as an Access road under the one network road classification (ONRC). Belle Terrace is two-lane undivided. There are no footpaths, cycle lanes or on-street parking along this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Belle Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Belle Terrace is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Belle Terrace has a mean operating speed in the range of 31.26 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Waiheke Road:</b> 50km/h (40km/h proposed)</li> <li><b>Belle View Place:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	780
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Medium, Very narrow	1.79
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	260	1

The Infrastructure Risk Rating Score is 2.58. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Belle Terrace.*

Belle Terrace is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Belle Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Belle Terrace due to a multitude of factors. These being the medium lane width and winding nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (31.26km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Belle Terrace in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Belle Terrace, the actual operating speeds from the MegaMaps tool are 31km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Belle View Place (Waiheke Island)

The speed limit on Belle View Place, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Belle View Place connects to Belle Terrace to the south. This road provides access residential areas. Belle View Place is approximately 0.17 km in length.</p> <p>Belle View Place is classified as an Access road under the one network road classification (ONRC). Belle View Place is two-lane undivided. There are no footpaths, cycle lanes or on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Belle View Place were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Belle View Place is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Belle View Place has a mean operating speed in the range of 31.26 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Belle Terrace:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	170
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	260	1

The Infrastructure Risk Rating Score is 2.17. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Belle View Place.*

Belle View Place is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Belle View Place was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Belle View Place due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (31.26km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Belle View Place in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Belle View Place, the actual operating speeds from the MegaMaps tool is 31km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Beresford Avenue (Surfdale)

The speed limit on Beresford Avenue, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Beresford Avenue connects to Beatty Parade / George Street to the northeast and Tetley Road / Marama Avenue to the south. This road provides access to residential areas. Beresford Avenue is approximately 0.71 km in length.</p> <p>Beresford Avenue is classified as an Access road under the one network road classification (ONRC). Beresford Avenue is two-lane undivided. There are no pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 0 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Beresford Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Beresford Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Beresford Avenue has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Beatty Parade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>George Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tetley Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Marama Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Short Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Fisher Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	710
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	260	1

The Infrastructure Risk Rating Score is 2.5. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Beresford Avenue.*

Beresford Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Beresford Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Beresford Avenue due to a multitude of factors. These being the narrow and winding nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20.46km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Beresford Avenue in Surfdale is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Beresford Avenue, the actual operating speeds from the traffic survey are 20.46km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Blake Street (Surfdale)

The speed limit on Blake Street, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blake Street connects to Hamilton Road to the north and The Esplanade to the south. This road provides access to the residential areas and the beach. Blake Street is approximately 0.1 km in length.</p> <p>Blake Street is classified as an Secondary Collector road under the one network road classification (ONRC). Blake Street is two-lane undivided. There are footpaths, and on-street parking is informally provided along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blake Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Blake Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Blake Street has a mean operating speed in the range of 28.8 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hamilton Road</b> : 50 km/h (proposed 30 km/h)</li> <li><b>The Esplanade</b>: 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	100
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium, very narrow	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Blake Street.*

Blake Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Blake Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Blake Street due to a multitude of factors. These being the medium lane width and straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (28.8km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Blake Street in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Blake Street, the actual operating speeds from the traffic survey are 29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Brown Road Onetangi

The speed limit on Brown Road, Onetangi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brown Road connects to Seaview Road to the north. This road provides access to residential areas and a hostel. Brown Road is approximately 0.15 km in length.</p> <p>Brown Road is classified as an Access road under the one network road classification (ONRC). Brown Road is Unsealed. There are no footpaths, cycle lanes or on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Brown Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 232 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (149 vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Brown Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Brown Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Seaview Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	150
Annual Daily Traffic (vpd)	232

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	232	1

The Infrastructure Risk Rating Score is 2.95. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Brown Road.*

Brown Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Brown Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Brown Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as 'Low and Low respectively.

After considering all the above factors, the existing speed limit of 50 km/h on Brown Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed. The road is short in length. The proposed speed limit is consistent with the adjoin road.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Bryan Road (Surfdale)

The speed limit on Bryan Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bryan Road connects to Ocean Road to the north and Alison Road to the south. This road provides access to residential areas. Bryan Road is approximately 0.17 km in length.</p> <p>Bryan Road is classified as an Access road under the one network road classification (ONRC). Bryan Road is two-lane undivided. There are no footpaths, cycle lanes or on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bryan Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 84 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (also 84 vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Bryan Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bryan Road has a mean operating speed in the range of 22.92 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Alison Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Nelson Ave:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	170
Annual Daily Traffic (vpd)	84

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	84	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Bryan Road.*

Bryan Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Bryan Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Bryan Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (22.92km/h). These features also contribute to the road's "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Bryan Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Bryan Road, the actual operating speeds from the traffic survey are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Burrell Road (Oneroa/Surfdale)

The speed limit on Burrell Road, Oneroa/Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Burrell Road connects to Surfdale Road / Moana Avenue to the north. This road provides access to residential areas and the beach. Burrell Road is approximately 0.81 km in length.</p> <p>Burrell Road is classified as an Access road under the one network road classification (ONRC). Burrell Road is two-lane undivided. There are no footpaths, cycle lanes or on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crash. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Burrell Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 364 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Burrell Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Burrell Road has a mean operating speed in the range of 24.18 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Moana Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Burrell Road Extension:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	810
Annual Daily Traffic (vpd)	364

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	364	1

The Infrastructure Risk Rating Score is 2.20. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Burrell Road.*

Burrell Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Burrell Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Burrell Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the High roadside hazards, its Access function and its existing mean operating speed (24.18km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crash.

After considering all the above factors, the existing speed limit of 50 km/h on Burrell Road in Oneroa/Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Burrell Road, the actual operating speeds from the Megamaps tool are 24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Burrell Road Extension (Oneroa)

The speed limit on Burrell Road Extension, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Burrell Road Extension connects to Burrell Road to the south. This road provides access to residential areas. Burrell Road Extension is approximately 0.28 km in length.</p> <p>Burrell Road Extension is not classified under the one network road classification (ONRC). However, given the function and use of the road to residential areas only, this road could be classified as an Access Road. Burrell Road Extension is two-lane undivided. There are no footpaths, cycle lanes or on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Burrell Road Extension were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	No average daily traffic (ADT) data was available.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Burrell Road Extension is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This road has no available recorded mean operating speed.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Burrell Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	280
Annual Daily Traffic (vpd)	n/a

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	n/a	1

The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Burrell Road Extension.*

Even though no mean operating speed data was available, given the function and nature of the road and the low operating speed of the adjoining road, Burrell Road Extension is likely to be a Self-Explaining road (despite the existing 50 km/h speed limit). Engineering up of Burrell Road Extension was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Burrell Road Extension due to a multitude of factors. These being the narrow and straight nature of the road, and the moderate roadside hazards. These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Burrell Road Extension in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Burrell Road Extension, no data was readily available for the mean operating speed along this road. However, given the access nature of the road and the low mean operating speed of the adjoining Burrell Road (20km/h) it is considered unlikely that mean operating speeds would exceed 30km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Cable Bay Lane (Waiheke Island)

The speed limit on Cable Bay Lane, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Cable Bay Lane connects to Walter Frank Drive to the east. This road provides access to residential properties.
	Cable Bay Lane is approximately 0.35 km in length. Cable Bay Lane is classified as an Access road under the one network road classification (ONRC).
	Cable Bay Lane is Two-lane undivided. There are no footpaths, cycle lanes or on-street parking provided along this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cable Bay Lane were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from Mobile Road as 174 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Cable Bay Lane is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cable Bay Lane has a mean operating speed in the range of 35 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Walter Frank Drive:</b> 50km/h (proposed 40km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	350
Annual Daily Traffic (vpd)	173

The Collective Risk score is 0, and a Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of Low and the Personal Risk band of Low.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.1
Traffic volume	<1000	1

The Infrastructure Risk Rating Score is 1.5. For Rural areas this corresponds to an IRR band of Medium.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Cable Bay Lane.*

Cable Bay Lane is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Cable Bay Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Cable Bay Lane due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its access function and its existing mean operating speed (35 km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Cable Bay Lane in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Cable Bay Lane is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Calais Terrace (Ostend)

The speed limit on Calais Terrace Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Calais Terrace connects to Ostend Road to the north and Natzka Road to the west. This road provides access to residential area. Calais Terrace is approximately 0.55 km in length.
	Calais Terrace is classified as an Access road under the one network road classification (ONRC). Calais Terrace is a two-lane undivided road. There are no footpaths, cycle lanes or on-street parking provided along this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Calais Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Calais Terrace is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Calais Terrace has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ostend Road:</b> 50km/h</li> <li><b>Natzka Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	550
Annual Daily Traffic (vpd)	208

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	208	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Calais Terrace.*

Calais Terrace is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Calais Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Calais Terrace due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Calais Terrace in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Calais Terrace, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Church Bay Road (Oneroa/Waiheke Island)

The speed limit on Church Bay Road, Oneroa/Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Church Bay Road connects to Mako Street to the north and Walter Frank Drive to the south. This road provides access to a vineyard and residential properties. Church Bay Road is approximately 2.56 km in length.</p> <p>Church Bay Road is classified as an Access road under the one network road classification (ONRC). Church Bay Road is Two-lane undivided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 0 non-injury crashes. There are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Church Bay Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided road</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 683 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Church Bay Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Church Bay Road has a mean operating speed in the range of 35 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Walter Frank Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Nick Johnston Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Mako Street:</b> 50 km/h (proposed 30/40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	2560
Annual Daily Traffic (vpd)	683

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.3
Traffic volume (vpd)	683	1

The Infrastructure Risk Rating Score is 2.16. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Church Bay Road.*

Church Bay Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speed, despite the existing 50 km/h speed limit. Engineering up of Church Bay Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Church Bay Road due to a multitude of factors. These being the Medium and Winding nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (35km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 0 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Church Bay Road in Oneroa/Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Church Bay Road is 40 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80km/h, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Coromandel Road (Oneroa)

The speed limit on Coromandel Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coromandel Road connects to Great Barrier Road to the northwest and Hauraki Road to the southeast. This road provides access to residential properties. Coromandel Road is approximately 1.18 km in length.</p> <p>Coromandel Road is classified as an Secondary Collector road under the one network road classification (ONRC). Coromandel Road is two-lane undivided road. There are no footpaths, cycle lanes or on-street parking provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Coromandel Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Coromandel Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Coromandel Road has a mean operating speed in the range of 30.12 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Great Barrier Road:</b> 50km/h (30km/h proposed)</li> <li><b>Karaka Road:</b> 50km/h (30km/h proposed)</li> <li><b>Hauraki Road:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1180
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Coromandel Road.*

Coromandel Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Coromandel Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Coromandel Road due to a multitude of factors. These being the narrow and winding nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (30.12km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Coromandel Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Coromandel Road, the actual operating speeds from the MegaMaps tool are 30km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cory Road (Oneroa/Palm Beach)

The speed limit on Cory Road, Oneroa/Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cory Road connects to Hauraki Road to the west and Hill Road to the east. This road provides access to residential properties and connection to the wider road network. Cory Road is approximately 0.84 km in length.</p> <p>Cory Road is classified as an Secondary Collector road under the one network road classification (ONRC). Cory Road is Two-lane undivided. The majority of Cory Road has no footpath, cycle lanes or on-street parking. However, a small section of unpaved footpath is provided at the western section of Cory Road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crash.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cory Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 685 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Cory Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cory Road has a mean operating speed in the range of 38 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hauraki Road:</b> 50km/h (40km/h proposed)</li> <li><b>Junction Road:</b> 50km/h (40km/h proposed)</li> <li><b>Hill Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (m)	840
Annual Daily Traffic (vpd)	685

The Collective Risk score is 0.24 and the Personal Risk score is 95.2. For Urban areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume (vpd)	685	1

The Infrastructure Risk Rating Score is 2.73. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Cory Road.*

Cory Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Cory Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Cory Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (38km/h). These features also contribute to the roads "Medium-High" IRR score and due to adverse crash history on the road. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>1</sup>.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Cory Road in Oneroa/Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cowes Bay Road (Waiheke Island)

The speed limit on Cowes Bay Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Cowes Bay Road connects to Man O War Bay Road to the north and Orapiu Road to the south. This road provides access to residential properties, beach accesses and vineyard.
	Cowes Bay Road is approximately 6.3 km in length. Cowes Bay Road is classified as an Access road under the one network road classification (ONRC).
	Cowes Bay Road is a two-way, unsealed road. There are no footpaths, cycle lanes or on-street parking provided along this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Cowes Bay Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage and the MegaMaps tool. The IRR defines Remote rural as <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from traffic surveys as 82 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Cowes Bay Road is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Cowes Bay Road has a mean operating speed in the range of 34.75 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Man O War Bay Road:</b> 80km/h (proposed 40km/h)</li> <li><b>Orapiu Road:</b> 80km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	6300
Annual Daily Traffic (vpd)	82

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low** and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Tortuous	6
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Remote rural	1
Intersection density (per km)	<1	1
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	82	1

The Infrastructure Risk Rating Score is 2.5. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Cowes Bay Road.*

Cowes Bay Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Cowes Bay Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Cowes Bay Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (34.75km/h). These features also contribute to the roads " " IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Cowes Bay Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Cowes Bay Road is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Crescent Road East (Ostend)

The speed limit on Crescent Road East, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crescent Road East connects to Wharf Road to the south and Crescent Road East Ext to the north. This road provides access to residential properties. Crescent Road East is approximately 0.75 km in length.</p> <p>Crescent Road East is classified as an Access road under the one network road classification (ONRC). Crescent Road East is a two-lane undivided road. There are no footpaths, cycle lanes or on-street parking provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crescent Road East were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Crescent Road East is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Crescent Road East has a mean operating speed in the range of 34.81 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Crescent Road West:</b> 50km/h (30km/h proposed)</li> <li><b>View Road:</b> 50km/h (30km/h proposed)</li> <li><b>Potai Road:</b> 50km/h (30km/h proposed)</li> <li><b>Homai Road:</b> 50km/h (30km/h proposed)</li> <li><b>Wharf Road:</b> 50km/h (50km/h proposed)</li> <li><b>Te Toki Road:</b> 50km/h (40km/h proposed)</li> <li><b>Wharf Road:</b> 50km/h (50km/h proposed)</li> <li><b>Potai Road:</b> 50km/h (30km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	750
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.29. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Crescent Road East.*

A proposed speed limit of 30km/h was selected for Crescent Road East due to a multitude of factors. These being the narrow and curved nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (34.81km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Crescent Road East in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Crescent Road East, the actual operating speeds from the MegaMaps tool are 35km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Crescent Road West (Ostend)

The speed limit on Crescent Road West, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crescent Road West connects to Bay Road to the south and Crescent Road East to the north. This road provides access to residential properties. Crescent Road West is approximately 0.79 km in length.</p> <p>Crescent Road West is classified as an Access road under the one network road classification (ONRC). Crescent Road West is a two-lane undivided road. There are no footpaths, cycle lanes or on-street parking provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Crescent Road West were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Crescent Road West is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Crescent Road West has a mean operating speed in the range of 34.81 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bay Road:</b> 50km/h (30km/h proposed)</li> <li><b>Crescent Road East:</b> 50km/h (30km/h proposed)</li> <li><b>View Road:</b> 50km/h (30km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	790
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.50. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Crescent Road West.*

A proposed speed limit of 30km/h was selected for Crescent Road West due to a multitude of factors. These being the narrow and winding nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (34.81km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes,.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Crescent Road West, the actual operating speeds from the MegaMaps tool are 35km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Delamore Drive (Oneroa)

The speed limit on Delamore Drive, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Delamore Drive connects to Tiri Road to the east. This road provides access to residential properties and small rural businesses (such as horse riding).
	Delamore Drive is approximately 1.32 km in length. Delamore Drive is classified as an Access road under the one network road classification (ONRC).
	Delamore Drive is two-way, two-lane, undivided road. There are no footpaths, cycle lanes or on-street parking provided along on this road.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Delamore Drive were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow and Very narrow</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Delamore Drive is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Delamore Drive has a mean operating speed in the range of 32.9 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tiri Road:</b> 50km/h (30km/h proposed)</li> <li><b>Alan Murray Lane:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1320
Annual Daily Traffic (vpd)	104

The Collective Risk score is **Low** and the Personal Risk score is **Low**. For Rural areas this corresponds to a Collective Risk band of 0, and a Personal Risk band of 0.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 1.7. For Rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Delamore Drive.*

Delamore Drive is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Delamore Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Delamore Drive due to a multitude of factors. These being the narrow and curved nature of the road, the high roadside hazards, its access function and its existing mean operating speed (32.9km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Delamore Drive in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Delamore Drive is 40 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80km/h); this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Dickson Road (Surfdale)

The speed limit on Dickson Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Dickson Road connects Wilma Road to the east. This road provides access to residential properties. Dickson Road is approximately 0.13 km in length.</p> <p>Dickson Road is classified as an Access road under the one network road classification (ONRC). Dickson Road is an unsealed road. There are no footpaths, cycle lanes or on-street parking provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Dickson Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Minor</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Dickson Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Dickson Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wilma Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	130
Annual Daily Traffic (vpd)	50

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Minor	0.67
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	50	1

The Infrastructure Risk Rating Score is 2.08. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Dickson Road.*

Dickson Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Dickson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Dickson Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Minor roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as 'Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Dickson Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Dickson Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Donald Bruce Road (Surfdale)

Donald Bruce Road, Surfdale, is divided into the following section and outlined as follows<sup>1</sup>:

1. Section 1: Donald Bruce Road between 55m south of Causeway Road and 28m north of Esslin Road
2. Section 2: Donald Bruce Road between Causeway Road and Kennedy Road
3. Section 3: Donald Bruce Road between Kennedy Road and southern end of Donald Bruce Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Donald Bruce Road, Surfdale have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Donald Bruce Road – Section 1, starts from 55m south of Causeway Road to the north of and ends 28m north of Esslin Road to the south. This road provides access to residential properties and a school.	Donald Bruce Road – Section 2, connects Causeway Road / Alison Road to the North and Kennedy Point Road to the south. This road provides access to residential properties	Donald Bruce Road – Section 3, connects to Kennedy Point Road to the north and Kennedy Point Ferry Terminal to the south. This road provides access to the Ferry Terminal and residential properties.
	This section of Donald Bruce Road is 0.45km in length. It is classified as an Arterial road under the one network road classification (ONRC). Donald Bruce Road is a two-lane undivided road.	This section of Donald Bruce Road is 1.52km in length. It is classified as an Arterial road under the one network road classification (ONRC). Donald Bruce Road is a two-lane undivided road.	This section of Donald Bruce Road is 0.33km in length. It is classified as an Arterial road under the one network road classification (ONRC). Donald Bruce Road is a two-lane undivided road..
	This section is a two-way, two-lane, undivided road. There are pedestrian amenities including a pedestrian refuge island and a cycle lane.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities including a pedestrian refuge island and a cycle lane.	This section is a two-way, two-lane, undivided road. There are pedestrian amenities including a pedestrian refuge island and a cycle lane.
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered		

(d) crash risk for all road users; and	CAS records 1 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.	CAS records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Donald Bruce Road were determined using a combination of site drive-over footage and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Severe</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Severe</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Severe</p>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2615 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2615 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2615 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/engineering measures for the area are planned, details of the measures for this road are still under investigation.		

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for “reduced speed limits near schools, kindergartens and community facilities”.</p> <p>Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	<p>The existing speed limit(s) on Donald Bruce Road are as follows:</p> <ul style="list-style-type: none"> <li>A variable 40km/h Between 55m south of Causeway Road and 28m north of Esslin Road. Operates at the start and end of the school day.</li> <li>50km/h Between Causeway Road and Kennedy Road</li> <li>50km/h Between Kennedy Road and southern end of Donald Bruce Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	<p>The mean operating speed limit(s) on Donald Bruce Road are as follows:</p> <ul style="list-style-type: none"> <li>42.66km/h Between 55m south of Causeway Road and 28m north of Esslin Road</li> <li>42.66km/h Between Causeway Road and Kennedy Road</li> <li>42.66km/h Between Kennedy Road and southern end of Donald Bruce Road</li> </ul>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Causeway Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Alison Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Hooks Lane:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Esslin Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	0	0
DSI crashes during the period	1	0	0
Corridor Length (m)	950	1850	1850
Annual Daily Traffic (vpd)	2615	2615	2615

- Section 1
  - The Collective Risk score is 0.21. For Urban areas this corresponds to a Collective Risk band of **High**.
  - Personal Risk score is 22.06. A Personal Risk band of **High**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

- Section 3
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium, Very narrow	1.79	Medium, Very narrow	1.79	Medium, Very narrow	1.79
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3	>20	1.3
Traffic volume	2615	1.4	2615	1.4	2615	1.4

- Section 1: The Infrastructure Risk Rating Score is 2.68. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.68. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 3: The Infrastructure Risk Rating Score is 2.68. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- 50km/h Between 55m south of Causeway Road and 28m north of Esslin Road (Section 1),
- 50km/h Between Causeway Road and Kennedy Road (Section 2),
- 50km/h Between Kennedy Road and southern end of Donald Bruce Road (Section 3)

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 30km/h on Between 55m south of Causeway Road and 28m north of Esslin Road (Section 1),
- 50km/h on Between Causeway Road and Kennedy Road (Section 2),
- 30km/h on Between Kennedy Road and southern end of Donald Bruce Road (Section 3).

For Donald Bruce Road – Section 1, a proposed variable speed limit of 30km/h was selected, for Section 1 due to a multitude of factors, not least the presence of two schools with frontage to the road in this section. Additional factors included the curved nature of the road, the Severe roadside hazards, its Arterial function and high pedestrian and cyclist demand during school pickup and drop-off peak periods. These features also contribute to the roads “Medium-

High" IRR score. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>2</sup>.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor and 0 non-injury crashes.

Waka Kotahi have indicated that variable 30km/h speed limits would be appropriate if the operating speeds during the times of variable speed limit operation were less than 30km/h and they are notified of the proposal. Waka Kotahi will be notified of this proposal for a variable 30km/h speed limit prior to public consultation.

Due to the lock down in 2021, traffic survey will be undertaken to monitor the traffic speed during peak periods once the school opens. It will be engineered down if monitoring finds that the operating speed at those times is high.

Donald Bruce Road – Section 2, is a self-explaining road. A proposed speed limit of 50km/h was selected, for Section 2 due to a multitude of factors. These being Medium and Curved nature of the road, the Severe roadside hazards, its Arterial function and its existing mean operating speed (42.66km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes, making it a high-risk road<sup>3</sup>.

Crash history from WK NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 0 serious, 3 minor and 2 non-injury crashes.

Donald Bruce Road – Section 3. A proposed speed limit of 30km/h was selected, for Section 3 due to a multitude of factors. These being Medium and Curved nature of the road, the Severe roadside hazards, its Arterial function and its existing mean operating speed (42.66km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes, making it a high-risk road<sup>4</sup>.

Crash history from WK NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 0 serious, 3 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Donald Bruce Road in Surfdale, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Donald Bruce Road – Section 2, is 50 km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests 50 km/h as the safe and appropriate speed for Donald Bruce Road – Sections 1 & 3, the actual operating speeds from the MegaMaps are 42.66km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>4</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Eden Terrace Onetangi

The speed limit on Eden Terrace Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Eden Terrace connects to Onetangi Road to the northwest and Trig Hill Road to the southwest. This road provides access to residential properties. Eden Terrace is approximately 0.67 km in length. There are no footpaths or cycle lanes provided.</p> <p>Eden Terrace is classified as an Secondary Collector road under the one network road classification (ONRC). Eden Terrace is a two-lane undivided road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Eden Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 624 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Eden Terrace is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Eden Terrace has a mean operating speed in the range of 28 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Onetangi Road:</b> 50km/h (50km/h proposed)</li> <li>• <b>Marine View Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Victoria Road South:</b> 50km/h (30km/h proposed)</li> <li>• <b>Hobson Terrace:</b> 50km/h (30km/h proposed)</li> <li>• <b>Trig Hill Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	670
Annual Daily Traffic (vpd)	624

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	624	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Eden Terrace.

Eden Terrace is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Eden Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Eden Terrace due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (28.36km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Eden Terrace in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Eden Terrace, the actual operating speeds from the MegaMaps tool are 28 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Empire Avenue (Oneroa)**

The speed limit on Empire Avenue, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Empire Avenue connects to Great Barrier Road to the north. This road provides access residential properties. Empire Avenue is approximately 0.2 km in length.</p> <p>Empire Avenue is classified as an Access road under the one network road classification (ONRC). Empire Avenue is a two-way, unsealed road. No pedestrian footpaths or cycle lanes are provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Empire Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>Access density: &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Empire Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Empire Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Great Barrier Road: 50km/h (30km/h proposed)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	200
Annual Daily Traffic (vpd)	25

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	25	1

The Infrastructure Risk Rating Score is 2.43. For Urban areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Empire Avenue.

Empire Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Empire Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Empire Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Empire Avenue in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Empire Avenue, the actual operating speeds from the MegaMaps tool 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Erua Road (Ostend)**

The speed limit on Erua Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Erua Road connects to Sea View Road to the north and Ostend Road to the south. This road provides access commercial, residential and light industrial properties. Erua Road is approximately 0.92 km in length.</p> <p>Erua Road is classified as an Secondary Collector road under the one network road classification (ONRC). Erua Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. Perpendicular parking is provided along Erua Road, with some vehicles also parking parallel along the berms.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Erua Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using the drive over footage and the MegaMaps tool. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Erua Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Erua Road has a mean operating speed in the range of 29.6 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sea View Road:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Ostend Road:</b> 50 km/h</li> <li>• <b>Tahi Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Poto Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	920
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial big box	4
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.12. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Erua Road.*

Erua Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Erua Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Erua Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (29.6km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Erua Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Erua Road, the actual operating speeds from the MegaMaps tool is 29.6 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Esslin Road (Surfdale)**

The speed limit on Esslin Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Esslin Road connects to Donald Bruce Road to the south-east. This road provides access to residential properties. Esslin Road is approximately 0.2 km in length.</p> <p>Esslin Road is classified as an Secondary Collector road under the one network road classification (ONRC). Esslin Road is a two-lane undivided road. There is a footpath provided on the north-eastern side of the road. There are no on-street parking or cycle lanes provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Esslin Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Esslin Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Esslin Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Donald Bruce Road:</b> 50km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	200
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Esslin Road.

Esslin Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Esslin Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Esslin Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Esslin Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Esslin Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Fairview Crescent (Ōmiha)**

The speed limit on Fairview Crescent, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fairview Crescent connects to Upland Road / Watson Road to the south/east and Glen Brook Road / Okoka Road to the south/west. This road provides access to residential areas. Fairview Crescent is approximately 1.72 km in length.</p> <p>Fairview Crescent is classified as an Access road under the one network road classification (ONRC). Fairview Crescent is a two-lane undivided road. There are no pedestrian footpaths or on-street parking along this road. There are no cycle lanes provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fairview Crescent were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt; 20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 146 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Fairview Crescent is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fairview Crescent has a mean operating speed in the range of 20 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Okoka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Glen Brook Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Bella Vista Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Watson Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Upland Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1,072
Annual Daily Traffic (vpd)	146

The Collective Risk score is 0 and the Personal Risk score is 0. For urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-way undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3.0
Intersection density (per km)	2 to <3	1.3
Access density (per km)	>20	1.3
Traffic volume (vpd)	146	1.0

The Infrastructure Risk Rating Score is 2.40. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Fairview Crescent.

Fairview Crescent is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Fairview Crescent was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Fairview Crescent due to a multitude of factors. These being the Narrow and Curved nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Fairview Crescent in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fairview Crescent, the actual operating speeds from the MegaMaps tool are 20km/h .

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – First Avenue (Onetangi)

The speed limit on First Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>First Avenue intersects with Le Roy Road, from the west, approximately midway along its alignment. This road provides access to residential properties. First Avenue is approximately 0.07 km in length.</p> <p>First Avenue is classified as an Access road under the one network road classification (ONRC). First Avenue is two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for First Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on First Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of First Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Le Roy Road:</b> 50km/h (30km/h proposed)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	70
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	104	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of First Avenue.*

First Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of First Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for First Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high risk road.<sup>1</sup> The collective and personal risk of this road are classified as Low and Low respectively due the number of Death and Serious Injury (DSI) crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on First Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for First Avenue, the actual operating speeds from the MegaMaps is 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Fisher Road Waiheke Island**

The speed limit on Fisher Road Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fisher Road connects to Waiheke Road to the east. This road provides access residential properties.</p> <p>Fisher Road is approximately 0.17 km in length. Fisher Road is classified as an "No information available" road under the one network road classification (ONRC).</p> <p>Fisher Road is a two-way, unsealed road. There are no pedestrian footpaths or cycle lanes provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fisher Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	No average daily traffic (ADT) was available for this road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Fisher Road is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fisher Road has no data available for the mean operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waiheke Road:</b> 50km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	170
Annual Daily Traffic (vpd)	n/a

The Collective Risk score is 0, and a Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low** and the Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	n/a	1

The Infrastructure Risk Rating Score is 2.3. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Fisher Road.*

Even though no mean operating speed data was available, given the function and nature of the road (particularly that it is unsealed), Fisher Road is likely to be a Self-Explaining road (despite the existing 80 km/h speed limit). Engineering up of Fisher Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Fisher Road due to a multitude of factors. These being the narrow and curved nature of the road and the moderate roadside hazards. These features also contribute to the roads “High” IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Fisher Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Fisher Road is 40km/h which is aligned with the recommended safe and appropriate speed.

**Speed Limit Review – Fisher Street (Surfdale)**

The speed limit on Fisher Street, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fisher Street connects to Park Road to the west and Beresford Avenue to the east. This road provides access to residential areas. Fisher Street is approximately 0.31 km in length.</p> <p>Fisher Street is classified as an Access road under the one network road classification (ONRC). Fisher Street is a two-lane undivided road. There are no pedestrian footpaths or on-street parking along this road. There are no cycle lanes provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fisher Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>“Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt; 20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Fisher Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fisher Street has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Park Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Beresford Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-way undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3.0
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	260	1.0

The Infrastructure Risk Rating Score is 2.40. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Fisher Street.*

Fisher Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Fisher Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Fisher Street due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crash.

After considering all the above factors, the existing speed limit of 50 km/h on Fisher Street in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fisher Street, the actual operating speeds from the MegaMaps tool are 20km/h .

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Fourth Avenue (Onetangi)**

The speed limit on Fourth Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fourth Avenue connects to The Strand to the north and Onetangi Road / Waiheke Road to the south. This road provides access to the local shops. Fourth Avenue is approximately 0.25 km in length.</p> <p>Fourth Avenue is classified as an Secondary Collector road under the one network road classification (ONRC). Fourth Avenue is a two-lane undivided road. There are pedestrian footpaths and perpendicular on-street parking provided along this road. There are no cycle lanes provided. Two bus stops are provided along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fourth Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,029 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and the traffic survey (1,029vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Fourth Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fourth Avenue has a mean operating speed in the range of 30 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>The Strand:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Onetangi Road:</b> 50 km/h (proposed 50 km/h)</li> <li>• <b>Waiheke Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	250
Annual Daily Traffic (vpd)	1,029

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium, Very narrow	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	1029	1.4

The Infrastructure Risk Rating Score is 2.51. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Fourth Avenue.*

Fourth Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Fourth Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Fourth Avenue due to a multitude of factors. These being the medium lane width and curved nature of the road, the high roadside hazards, its Secondary Collector function and its existing mean operating speed (30km/h). These features also contribute to the road’s “Medium-High” IRR score, making it a high-risk road<sup>1</sup>.

Crash history from WK NZTA’s CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Fourth Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Fourth Avenue, the actual operating speeds from the MegaMaps tool are 30 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Frank Street (Oneroa/Surfdale)**

The speed limit on Frank Street, Oneroa/Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Frank Street connects to Pacific Parade to the and Queens Drive to the northeast. This road provides access to residential areas. Frank Street is approximately 0.84 km in length.</p> <p>Frank Street is classified as an Secondary Collector road under the one network road classification (ONRC). Frank Street is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Frank Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>“Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.”</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Frank Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Frank Street has a mean operating speed in the range of 22.75 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Pacific Parade:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Hekeura Road:</b> 50km/h (proposed 30km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	840
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.49. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Frank Street.

Frank Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Frank Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Frank Street due to a multitude of factors. These being the narrow and winding nature of the road, the high roadside hazards, its Secondary Collector function and its existing mean operating speed (22.75km/h). These features also contribute to the road’s “Medium-High” IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA’s CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Frank Street in Oneroa/Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Frank Street, the actual operating speeds from the MegaMaps tool are 22.75 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Garratt Road (Waiheke Island)**

The speed limit on Garratt Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Garratt Road connects to Waiheke Road to the south. This road provides access to residential areas. Garratt Road is approximately 0.29 km in length.</p> <p>Garratt Road is classified as an Access road under the one network road classification (ONRC). Garratt Road is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Garratt Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.”
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 124 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (80vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Garratt Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Garratt Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Waiheke Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	290
Annual Daily Traffic (vpd)	124

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	124	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Garratt Road.*

Garratt Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Garratt Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Garratt Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Garratt Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Garratt Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

### Speed Limit Review – George Street (Oneroa/Surfdale)

The speed limit on George Street, Oneroa/Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>George Street connects to Beresford Avenue / Beatty Parade to the west and Pacific Parade to the east. This road provides access to residential areas George Street is approximately 0.25 km in length.</p> <p>George Street is classified as an Secondary Collector road under the one network road classification (ONRC). George Street is a two-lane undivided road. There are no pedestrian footpaths and no formal on-street parking along this road. However, it was observed that some vehicles were parallel parked (including on the berm). There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for George Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on George Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of George Street has a mean operating speed in the range of 39 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Beresford Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Beatty Parade:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Pacific Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	250
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of George Street.

A proposed speed limit of 30km/h was selected for George Street, due to a multitude of factors. These being the narrow and winding nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (39km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on George Street in Oneroa/Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for George Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

### Speed Limit Review – Giles Road (Ostend)

The speed limit on Giles Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Giles Road connects to Bay Road to the west. This road provides access to residential areas. Giles Road is approximately 0.31 km in length.</p> <p>Giles Road is classified as an Secondary Collector road under the one network road classification (ONRC). Giles Road is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Giles Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Giles Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Giles Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bay Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Giles Road.*

Giles Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Giles Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Giles Road, due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Giles Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Giles Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

### Speed Limit Review – Glen Brook Road (Ōmiha)

The speed limit on Glen Brook Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Glen Brook Road connects to Okoka Road to the north and Obrien Road / Pohutukawa Avenue to the south. This road provides access to residential areas. Glen Brook Road is approximately 1.07 km in length.</p> <p>Glen Brook Road is classified as an Secondary Collector road under the one network road classification (ONRC). Glen Brook Road is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Glen Brook Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Glen Brook Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Glen Brook Road has a mean operating speed in the range of 22.27 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Okoka Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Obrien Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Pohutukawa Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Omiha Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Watson Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Fairview Crescent:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1,070
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.81. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Glen Brook Road.

Glen Brook Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Glen Brook Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Glen Brook Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (22.27km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Glen Brook Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Glen Brook Road, the actual operating speeds from the MegaMaps tool are 22.27 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Goodwin Avenue (Oneroa)**

The speed limit on Goodwin Avenue, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Goodwin Avenue connects Ocean View Road to the west and Queens Drive to the east. This road provides access to residential areas. Goodwin Avenue is approximately 0.84 km in length.</p> <p>Goodwin Avenue is classified as an Secondary Collector road under the one network road classification (ONRC). Goodwin Avenue is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Goodwin Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,118 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and the traffic surveys (1,118vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Goodwin Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Goodwin Avenue has a mean operating speed in the range of 38.73 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ocean View Road:</b> 50 km/h (proposed 50 km/h)</li> <li>• <b>Queens Drive:</b> 50 km/h (proposed 30 / 40 km/h)</li> <li>• <b>Hekerua Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	840
Annual Daily Traffic (vpd)	1,118

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	1118	1.4

The Infrastructure Risk Rating Score is 2.68. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Goodwin Avenue.

Goodwin Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Goodwin Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Goodwin Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (38.73km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Goodwin Avenue in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Goodwin Avenue is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Gordons Road Waiheke Island**

Gordons Road, Waiheke Island, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Gordons Road between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats)
2. Section 2: Gordons Road between 2.3km south of Carsons Road and southern end of Gordons Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Gordons Road, Waiheke Island has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Gordons Road connects to O'Brien Road to the north west. This road provides access to residential properties, vineyards and Whakanewha Regional Park.	
	This section of Gordons Road is classified as an Secondary Collector road under the one network road classification (ONRC). This section is 3.03km in length.	This section of Gordons Road is classified as an Secondary Collector road under the one network road classification (ONRC). This section is 1.82km in length.
	This section of Gordons Road is two-lane undivided. There are no pedestrian and/or cyclist amenities along this section.	This section of Gordons Road is unsealed. There are no pedestrian and/or cyclist amenities along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 0 crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Gordons Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium and Very narrow</li> </ul> <b>Roadside hazards (in both directions):</b> Severe	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium and Very narrow</li> </ul> <b>Roadside hazards (in both directions):</b> Severe
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage. The IRR defines Remote rural as Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.	The adjacent land use is classified as Remote rural using the drive over footage. The IRR defines Remote rural as Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> </ul> <b>Access density:</b> 2 to <5	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> </ul> <b>Access density:</b> 2 to <5
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 602 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 602 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limits on Gordons Road are as follows: <ul style="list-style-type: none"> <li>• 80km/h Between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats)</li> <li>• 80km/h From 2.3km south of Carsons Road and southern end of Gordons Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Gordons Road are as follows: <ul style="list-style-type: none"> <li>• 43km/h Between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats)</li> <li>• 24.76km/h From 2.3km south of Carsons Road and southern end of Gordons Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>O'Brien Road:</b> 50km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	3030	1820
Annual Daily Traffic (vpd)	602	602

- Section 1
  - The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of Low.
  - Personal Risk score is 0. A Personal Risk band of Low.
- Section 2
  - The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of Low.
  - Personal Risk score is 0. A Personal Risk band of Low.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Unsealed	10
Road alignment	Winding	3.5	Curved	1.8

Carriageway width (road lane + shoulder)	Medium, Very narrow	1.79	Medium, Very narrow	1.79
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Remote rural	1	Remote rural	1
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume	602	1	602	1

- Section 1: The Infrastructure Risk Rating Score is 1.89. For Rural areas this corresponds to an IRR band of Medium-High.
- Section 2: The Infrastructure Risk Rating Score is 2.03. For Rural areas this corresponds to an IRR band of High.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80km/h Between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats) (Section 1),
- <80km/h From 2.3km south of Carsons Road and southern end of Gordons Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50km/h on Between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats) (Section 1),
- 40km/h on From 2.3km south of Carsons Road and southern end of Gordons Road (Section 2).

Gordons Road between O'Brien Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats), is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 50km/h was selected, for Section 1 due to a multitude of factors. These being Medium and Winding nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (43km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including fatal, 0 serious, 1 minor and 0 non-injury crashes.

Gordons Road between 2.3km south of Carsons Road and southern end of Gordons Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 1 due to a multitude of factors. These being Medium and Curved nature of the road, the

Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (24.76km/h). These features also contribute to the roads "High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) on Gordons Road in Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Gordons Road Section 2 is 50 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80km/h); this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

The proposed safe and appropriate speed limit(s) for Gordons Road Section 2 is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Great Barrier Road (Oneroa)

The speed limit on Great Barrier Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Great Barrier Road connects to Coromandel Road to the southeast. This road provides access to residential areas and the beach. Great Barrier Road is approximately 1.35 km in length.</p> <p>Great Barrier Road is classified as an Secondary Collector road under the one network road classification (ONRC). Great Barrier Road is a two-lane undivided road. There are no pedestrian footpaths and on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Great Barrier Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Great Barrier Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Great Barrier Road has a mean operating speed in the range of 28.49 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Coromandel Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Empire Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1,350
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Great Barrier Road.*

Great Barrier Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Great Barrier Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Great Barrier Road due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (28.49km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Great Barrier Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Great Barrier Road, the actual operating speeds from the MegaMaps tool are 28.49 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Gulf Place (Oneroa)

The speed limit on Gulf Place, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gulf Place connects to Junction Road to the south This road provides access to residential areas. Gulf Place is approximately 0.25 km in length.</p> <p>Gulf Place is classified as an Access road under the one network road classification (ONRC). Gulf Place is a two-lane undivided road. There are no pedestrian footpaths and no on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gulf Place were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Gulf Place is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Gulf Place has a mean operating speed in the range of 34.63 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Junction Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	250
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	156	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Gulf Place.*

A proposed speed limit of 30km/h was selected for Gulf Place due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (34.63km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Gulf Place in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Gulf Place, the actual operating speeds from the MegaMaps tool are 34.63 km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hamilton Road (Surfdale)

Hamilton Road, Surfdale, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Hamilton Road between The Esplanade and Miami Avenue
2. Section 2: Hamilton Road between Miami Avenue and Ocean Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Hamilton Road, Surfdale have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Hamilton Road connects to The Esplanade to the south/west and Miami Avenue to the east. This road provides access to residential properties, some commercial activity, and Surfdale Beach.	Hamilton Road connects to Miami Avenue to the west and Ocean Road to the east. This road provides access to residential properties.
	This section of Hamilton Road is 0.51km in length. It is classified as an Arterial road under the one network road classification (ONRC). Hamilton Road is a two-lane undivided road.	This section of Hamilton Road is 0.44km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Hamilton Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths along parts of this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 3 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.	CAS records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Hamilton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <p><b>Access density:</b> &gt;20</p>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/engineering measures for the area are planned, details of the measures for this road are still under investigation.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hamilton Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between The Esplanade and Miami Avenue</li> <li>50km/h Between Miami Avenue and Ocean Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Hamilton Road are as follows: <ul style="list-style-type: none"> <li>37.2km/h Between The Esplanade and Miami Avenue</li> <li>34km/h Between Miami Avenue and Ocean Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Ocean Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Beatty Parade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tetley Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Miami Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Blake Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Lannan Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Esplanade (Surfdale):</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	2
DSI crashes during the period	1	0
Corridor Length (m)	390	440
Annual Daily Traffic (vpd)	520	520

- Section 1
  - The Collective Risk score is 0.51. For Urban areas this corresponds to a Collective Risk band of **High**.
  - Personal Risk score is 270.19. A Personal Risk band of **High**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium lane, Narrow shoulder	1.45	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.15. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between The Esplanade and Miami Avenue (Section 1),
- 40km/h Between Miami Avenue and Ocean Road (Section 2).

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between The Esplanade and Miami Avenue (Section 1),
- 30km/h on Between Miami Avenue and Ocean Road (Section 2).

Hamilton Road – Section 1. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Arterial function, and high place function with high volume of active road users. These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>2</sup>.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 1 serious, 1 minor and 1 non-injury crashes.

Hamilton Road – Section 2, a proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (34km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Hamilton Road in Surfdale, are not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hamilton Road – Section 1&2, the actual operating speeds from the MegaMaps tool are 34-37km/h .

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hartley Avenue (Onetangi)

The speed limit on Hartley Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Hartley Avenue connects to Sea View Road to the east. This road provides access to residential areas. Hartley Avenue is approximately 0.13 km in length.
	Hartley Avenue is classified as an Access road under the one network road classification (ONRC). Hartley Avenue is a two-lane undivided road. There are pedestrian footpaths and informal on-street parking provided along this road. There are no cycle lanes provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hartley Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hartley Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hartley Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Sea View Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	130
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	100	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Hartley Avenue.*

Hartley Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hartley Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Hartley Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hartley Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hartley Avenue, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hauraki Road Oneroa

The speed limit on Hauraki Road Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hauraki Road connects to Queens Drive to the west and Cory Road to the east. This road provides access to residential areas. Hauraki Road is approximately 0.76 km in length.</p> <p>Hauraki Road is classified as an Secondary Collector road under the one network road classification (ONRC). Hauraki Road is a two-lane undivided road. There are no pedestrian footpaths and no on-street parking along this road (although some vehicles parallel park on the berm). There are no cycle lanes. Bus stops are provided on the western end of the road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hauraki Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,261 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (1,261vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hauraki Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hauraki Road has a mean operating speed in the range of 40.8 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Karaka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Coromandel Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Cory Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	760
Annual Daily Traffic (vpd)	1,261

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	1261	1.4

The Infrastructure Risk Rating Score is 2.38. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Hauraki Road.*

Hauraki Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hauraki Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Hauraki Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (40.8km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hauraki Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Hauraki Road is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Hekerua Road (Oneroa)

The speed limit on Hekerua Road Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hekerua Road connects to Goodwin Avenue / Queens Drive to the north and Frank Street to the south. This road provides access to residential areas. Hekerua Road is approximately 0.69 km in length.</p> <p>Hekerua Road is classified as an Access road under the one network road classification (ONRC). Hekerua Road is a two-lane undivided road. There are no pedestrian footpaths and no formal on-street parking along this road (some vehicles were observed parking on the road or in the berm). There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hekerua Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hekerua Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hekerua Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Goodwin Avenue:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Frank Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	690
Annual Daily Traffic (vpd)	150

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume	150	1

The Infrastructure Risk Rating Score is 2.41. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Hekerua Road.*

Hekerua Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hekerua Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Hekerua Road due to a multitude of factors. These being the narrow and winding nature of the road, the high roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hekerua Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hekerua Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hill Road (Palm Beach)

Hill Road, Palm Beach, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Hill Road between Te Toki Road and the northern intersection with Palm Road
2. Section 2: Hill Road between Cory Road and Te Toki Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Hill Road, Palm Beach have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Hill Road connects to Palm Road to the north and Te Toki Road to the west. This road provides access to residential properties.	This section of Hill Road connects to Cory Road to the west and Te Toki Road to the east. This road provides access to residential properties.
	This section of Hill Road is 1.07km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Hill Road is a two-lane undivided road.	This section of Hill Road is 0.42km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Hill Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	for all road users and therefore the crash risk for all road users was considered. CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Hill Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> <li>• <b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limits on Hill Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Te Toki Road and northern intersection with Palm Road</li> <li>50km/h Between Cory Road and Te Toki Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Hill Road are as follows: <ul style="list-style-type: none"> <li>32.42km/h Between Te Toki Road and northern intersection with Palm Road</li> <li>32.42km/h Between Cory Road and Te Toki Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Palm Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Matapana Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Te Toki Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>The View Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Junction Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Cory Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Tiri View Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	1070	420
Annual Daily Traffic (vpd)	520	520

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Winding	3.5	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	3 to <5	1.5	3 to <5	1.5
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.58. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- 40km/h Between Te Toki Road and the northern intersection with Palm Road (Section 1),
- 40km/h Between Cory Road and Te Toki Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Te Toki Road and the northern intersection with Palm Road (Section 1),
- 40km/h on Between Cory Road and Te Toki Road (Section 2).

Hill Road – Section 1, between Te Toki Road and the northern intersection with Palm Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being the narrow and winding nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (32.42km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road.<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Hill Road – Section 2, between Cory Road and Te Toki Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 2 due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (32.42km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) on Hill Road in Palm Beach, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Hill Road – Section 2, is 40km/h which is aligned with the recommended safe and appropriate speed and consistent with the connected roads.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hill Road – Section 1, the actual operating speeds from the MegaMaps are 32.42km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hillside Road (Ostend)

The speed limit on Hillside Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hillside Road connects to Wilma Road to the south. This road provides access to residential areas. Hillside Road is approximately 0.29 km in length.</p> <p>Hillside Road is classified as an Access road under the one network road classification (ONRC). Hillside Road is an unsealed road. There are no pedestrian footpaths and no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hillside Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 94 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hillside Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hillside Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wilma Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	290
Annual Daily Traffic (vpd)	94

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	94	1

The Infrastructure Risk Rating Score is 2.43. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Hillside Road.*

Hillside Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hillside Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Hillside Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hillside Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hillside Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hobson Terrace (Onetangi)

The speed limit on Hobson Terrace Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hobson Terrace connects to Eden Terrace to the west and Victoria Road South to the east. This road provides access to residential areas. Hobson Terrace is approximately 0.53 km in length.</p> <p>Hobson Terrace is classified as an Access road under the one network road classification (ONRC). Hobson Terrace is an unsealed road. There are no pedestrian footpaths and no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hobson Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hobson Terrace is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hobson Terrace has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Eden Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Victoria Road South:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	530
Annual Daily Traffic (vpd)	52

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	52	1

The Infrastructure Risk Rating Score is 2.96. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Hobson Terrace.*

Hobson Terrace is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hobson Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Hobson Terrace due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hobson Terrace in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hobson Terrace, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Homai Street (Ostend)

The speed limit on Homai Street, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Homai Street connects to Te Toki Road / Crescent Road East / Wharf Road to the west and Whakarite Road to the east. This road provides access to residential areas. Homai Street is approximately 0.11 km in length.</p> <p>Homai Street is classified as an Secondary Collector road under the one network road classification (ONRC). Homai Street is a two-lane undivided road. There are pedestrian footpaths but no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Homai Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Homai Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Homai Street has a mean operating speed in the range of 31 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Toki Road:</b> 60 km/h (proposed 40 km/h)</li> <li><b>Crescent Road East:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Wharf Road:</b> 50 km/h</li> <li><b>Whakarite Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	110
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Homai Street.*

Homai Street is a Self-Explaining road as the mean operating speed is near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Homai Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Homai Street due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (31km/h). These features also contribute to the road's "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Homai Street, the actual operating speeds from the MegaMaps tool are 31 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hooks Lane (Surfdale)

The speed limit on Hooks Lane, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hooks Lane connects to Miami Avenue to . This road provides access to residential areas and a school. Hooks Lane is approximately 0.09 km in length.</p> <p>Hooks Lane is classified as an Access road under the one network road classification (ONRC). Hooks Lane is a two-lane undivided road. There are pedestrian footpaths but no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hooks Lane were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Low</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	<p>Central government policy is to implement 30km/h speed limits adjacent to urban schools.</p> <p>Key stakeholders have indicated general support for implementing 30km/h speed limits around urban schools. A recent survey of Auckland residents shows 78% support for "reduced speed limits near schools, kindergartens and community facilities".</p> <p>Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hooks Lane is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Hooks Lane has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Miami Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	90
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Low	0.4
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	100	1

The Infrastructure Risk Rating Score is 1.71. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Hooks Lane.*

Hooks Lane is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Hooks Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Hooks Lane due to a multitude of factors. These being the narrow and straight nature of the road, the low roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the road's "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hooks Lane in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Hooks Lane, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Huia Street (Oneroa)

The speed limit on Huia Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huia Street connects to Tawa Street to the north and Makora Avenue to the south. This road provides access to residential areas. Huia Street is approximately 0.31 km in length.</p> <p>Huia Street is classified as an Access road under the one network road classification (ONRC). Huia Street is a two-lane undivided road. There are no pedestrian footpaths and no formal on-street parking along this road (however, vehicles were observed parking on the berm). There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huia Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Huia Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Huia Street has a mean operating speed in the range of 25.33 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tawa Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Makora Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	312

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	312	1

The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Huia Street.*

Huia Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Huia Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Huia Street due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (25.33km/h). These features also contribute to the road's "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Huia Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Huia Street, the actual operating speeds from the MegaMaps tool are 25.33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hunterville Road (Waiheke Island)

The speed limit on Hunterville Road Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hunterville Road connects to Neil Avenue to the east and Anzac Avenue to the west. This road provides access to residential properties.</p> <p>Hunterville Road is approximately 0.1 km in length. Hunterville Road is classified as an access road under the one network road classification (ONRC).</p> <p>Hunterville Road is a two-way, unsealed road. There are no pedestrian footpaths or cycle lanes along this road. There is no formal on-street parking.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hunterville Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	No average daily traffic (ADT) was available.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Hunterville Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	No mean operating speed was available for this road
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Neil Avenue:</b> 50km/h (40km/h proposed)</li> <li><b>Anzac Avenue:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	100
Annual Daily Traffic	n/a

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Rural residential	1.5
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	n/a	1

The Infrastructure Risk Rating Score is 2.9. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Hunterville Road.*

Even though no mean operating speed data was available, given the function and nature of the road and the low operating speed of the adjoining road, Hunterville Road is likely to be a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds (despite the existing 50 km/h speed limit). Engineering up of Hunterville Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Hunterville Road due to a multitude of factors. These being the narrow and curved nature of the road and the severe roadside hazards. These features also contribute to the road's "High" IRR, making it a high risk road.<sup>1</sup> The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Hunterville Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests <80 km/h as the safe and appropriate speed for Hunterville Road, no data was readily available for the mean operating speed along this road. However, given the access nature of the road and the low mean operating speed of the adjoining road (20km/h) it is considered unlikely that mean operating speeds would exceed 30km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Huruhi Road (Oneroa)

The speed limit on Huruhi Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huruhi Road connects to Tahatai Road to the east. This road provides access to residential areas. Huruhi Road is approximately 0.15 km in length.</p> <p>Huruhi Road is classified as an Access road under the one network road classification (ONRC). Huruhi Road is an unsealed road. There are no pedestrian footpaths and no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huruhi Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Huruhi Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Huruhi Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tahatai Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	150
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	100	1

The Infrastructure Risk Rating Score is 2.67. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Huruhi Road.*

Huruhi Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Huruhi Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Huruhi Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Huruhi Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Huruhi Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Jellicoe Parade (Surfdale)

The speed limit on Jellicoe Parade, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jellicoe Parade connects to Ocean Road to the north and Alison Road to the south. This road provides access to residential areas. Jellicoe Parade is approximately 0.78 km in length.</p> <p>Jellicoe Parade is classified as an Secondary Collector road under the one network road classification (ONRC). Jellicoe Parade is a two-lane undivided road. There are pedestrian footpaths but no formal on-street parking along this road. There are no cycle lanes.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Jellicoe Parade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Jellicoe Parade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Jellicoe Parade has a mean operating speed in the range of 39.58 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean Road:</b> 50 km/h (proposed 30 / 40 km/h)</li> <li><b>Kennedy Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Alison Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	780
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Jellicoe Parade.*

Jellicoe Parade is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Jellicoe Parade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Jellicoe Parade due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (39.58km/h). These features also contribute to the road's "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Jellicoe Parade in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Jellicoe Parade is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Junction Road (Oneroa/Palm Beach)

The speed limit on Junction Road, Oneroa/Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Junction Road connects to Queens Drive / Pacific Parade / Ocean Road to the west and Cory Road / Hill Road to the east. This road provides access to residential areas. Junction Road is approximately 0.77 km in length.</p> <p>Junction Road is classified as an Access road under the one network road classification (ONRC). Junction Road is a two-lane undivided road. There are footpaths provided on this road. No cyclist amenities or on-street parking provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Junction Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Junction Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Junction Road has a mean operating speed in the range of 34.63 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Gulf Place:</b> 50km/h (proposed 30km/h)</li> <li><b>Pacific Parade:</b> 50km/h (proposed 40 km/h)</li> <li><b>Ocean Road:</b> 50km/h (proposed 40 km/h)</li> <li><b>Cory Road:</b> 50km/h (proposed 40 km/h)</li> <li><b>Hill Road:</b> 50km/h (proposed 40 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	770
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.29. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Junction Road.*

Junction Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Junction Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Junction Road due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (34.63km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Junction Road in Oneroa/Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Junction Road is 40 km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Karaka Road (Oneroa)

Karaka Road, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Karaka Road between Hauraki Rd and Coromandel Rd
2. Section 2: Karaka Road between Hauraki Rd and Queens Dr

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Karaka Road, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Karaka Road connects to Coromandel Road to the north and Hauraki Road to the south. This road provides access to residential properties.	This section of Karaka Road connects to Hauraki Road to the north and Queens Drive to the south. This road provides access to residential properties.
	This section of Karaka Road is 0.41km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Karaka Road is a two-lane undivided road.	This section of Karaka Road is 0.65km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Karaka Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.	This section is a two-way, two-lane, undivided road. There are no footpath or cycle lanes along this section.
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	for all road users and therefore the crash risk for all road users was considered. CAS records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Karaka Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> <li>• <b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Karaka Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Hauraki Rd and Coromandel Rd</li> <li>50km/h Between Hauraki Rd and Queens Dr</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Karaka Road are as follows: <ul style="list-style-type: none"> <li>34.9km/h Between Hauraki Rd and Coromandel Rd</li> <li>34.9km/h Between Hauraki Rd and Queens Dr</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Coromandel Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hauraki Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	410	650
Annual Daily Traffic (vpd)	520	520

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	3 to <5	1.5	3 to <5	1.5
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.29. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.29. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Hauraki Rd and Coromandel Rd (Section 1),
- 40km/h Between Hauraki Rd and Queens Dr (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Hauraki Rd and Coromandel Rd (Section 1),
- 30km/h on Between Hauraki Rd and Queens Dr (Section 2).

A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Narrow and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (34.9km/h). These features also contribute to the roads "Medium" IRR score the collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being Narrow and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (34.9km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Karaka Road in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Karu Street (Oneroa)

The speed limit on Karu Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Karu Street connects to Korora Road to the south. This road provides access to residential areas. Karu Street is approximately 0.21 km in length.</p> <p>Karu Street is classified as an Secondary Collector road under the one network road classification (ONRC). Karu Street is a two-lane undivided road. There are no footpaths or cycle lanes along this road. On-street parking provisions are not provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Karu Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Karu Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Karu Street has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Korora Road:</b> 50 km/h (proposed 30 / 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	210
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 1.74. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Karu Street.*

Karu Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Karu Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Karu Street due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Karu Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Karu Street, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kennedy Point Road (Surfdale)

The speed limit on Kennedy Point Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kennedy Point Road connects to Donald Bruce Road to the north. This road provides access to residential areas. Kennedy Point Road is approximately 0.57 km in length.</p> <p>Kennedy Point Road is classified as an Secondary Collector road under the one network road classification (ONRC). Kennedy Point Road is a two-lane undivided road. Footpaths are provided along this road. No cycle paths or on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. There are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kennedy Point Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Kennedy Point Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kennedy Point Road has a mean operating speed in the range of 22.82 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Donald Bruce Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	570
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Kennedy Point Road.*

Kennedy Point Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kennedy Point Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Kennedy Point Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (22.82km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Kennedy Point Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kennedy Point Road, the actual operating speeds from the MegaMaps tool are 22.82 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kennedy Road (Surfdale)

The speed limit on Kennedy Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kennedy Road connects to Jellicoe Parade to the north and Alison Road to the south. This road provides access to residential areas. Kennedy Road is approximately 0.63 km in length.</p> <p>Kennedy Road is classified as an Access road under the one network road classification (ONRC). Kennedy Road is Two-lane undivided. There are no footpaths or cycle paths/amenities provided. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kennedy Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Kennedy Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kennedy Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Jellicoe Parade:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Alison Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Nelson Avenue:</b> 50km/h (proposed 30km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	630
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Kennedy Road.*

Kennedy Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kennedy Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Kennedy Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Kennedy Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kennedy Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kiwi Street (Oneroa)

The speed limit on Kiwi Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kiwi Street connects to Moa Avenue to the north and The Esplanade to the south. This road provides access to residential areas. Kiwi Street is approximately 0.61 km in length.</p> <p>Kiwi Street is classified as an Access road under the one network road classification (ONRC). Kiwi Street is a Two-lane undivided road. There are no footpaths or cycle lanes/facilities along this road. Narrow on-street parking areas are provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kiwi Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Kiwi Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kiwi Street has a mean operating speed in the range of 25.33 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Moa Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Esplanade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tawa Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Makora Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	610
Annual Daily Traffic (vpd)	312

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	312	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Kiwi Street.*

Kiwi Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kiwi Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Kiwi Street due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its access function and its existing mean operating speed (25.33km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Kiwi Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kiwi Street, the actual operating speeds from the MegaMaps tool are 25.33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Korora Road (Oneroa)

Korora Road, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Korora Road between Ocean View Road and 350m north of Karu Street
2. Section 2: Korora Road between 350m north of Karu Street and northern end of Korora Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Korora Road, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Korora Road connects to Ocean View Road to the south and Karu Street to the north. This road provides access to residential properties, beach access and early childcare centre.	This section of Korora Road connects to Karu Street to the south and ends at the northern end of Korora Road. This road provides access to residential properties.
	This section of Korora Road is 0.71km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Korora Road is a two-lane undivided road.	This section of Korora Road is 0.84km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Korora Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road with a dashed centreline. There is on-street parking along this section. There is no footpath, or cycle lane.	This section is a two-way, two-lane, undivided road with a dashed centreline. There is on-street parking along this section. There is no footpath, or cycle lane.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Korora Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 550 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 550 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Korora Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Ocean View Road and Karu Street</li> <li>50km/h Between Karu Street and northern end of Karu Street</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Korora Road are as follows: <ul style="list-style-type: none"> <li>30.23km/h Between Ocean View Road and Karu Street</li> <li>30.23km/h Between Karu Street and northern end of Karu Street</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tiri Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Waikare Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Karu Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	700	857
Annual Daily Traffic (vpd)	550	550

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1	Straight	1
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	10 to <20	1.1
Traffic volume (vpd)	550	1	550	1

- Section 1: The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2: The Infrastructure Risk Rating Score is 1.91. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Ocean View Road and 350m north of Karu Street (Section 1),
- 40km/h Between 350m north of Karu Street and northern end of Korora Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Ocean View Road and 350m north of Karu Street (Section 1),
- 40km/h on Between 350m north of Karu Street and northern end of Korora Street (Section 2).

Korora Road – Section 1, between Ocean View Road and 350m north of Karu Street, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being the medium and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and high pedestrian/cyclist demand on the street. These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Korora Road – Section 2, between 350m north of Karu Street and northern end of Korora Street, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 2 due to a multitude of factors. These being Medium and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function. These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) on Korora Road in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Korora Road section 1, the actual operating speeds from the MegaMaps tool 30km/h.

Therefore we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

The proposed safe and appropriate speed limit(s) for Korora Road – Section 2 is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Kuaka Road (Oneroa)

The speed limit on Kuaka Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kuaka Road connects to Ocean View Road to the north and Weka Road to the south/west. This road provides access to residential properties and Alison Park. Kuaka Road is approximately 0.47 km in length.</p> <p>Kuaka Road is classified as an Access road under the one network road classification (ONRC). Kuaka Road is a two-lane undivided road. There are no footpaths or cycle paths/facilities along this section. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kuaka Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Kuaka Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kuaka Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Oue Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Weka Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	470
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Kuaka Road.*

Kuaka Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Kuaka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Kuaka Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Kuaka Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Kuaka Road, the actual operating speeds from the Megamaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ladd Road (Ostend)

The speed limit on Ladd Road Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Ladd Road connects to Ostend Road to the north and to Natzka Road to the south. This road provides access residential properties and is approximately 0.13 km in length.
	Ladd Road is classified as a Secondary Collector road under the one network road classification (ONRC). Ladd Road is a two-lane undivided road. There are no footpaths or cycle paths/amenities along this road. No on-street parking is provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ladd Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Ladd Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ladd Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ostend Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Natzka Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	130
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.56. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Ladd Road.*

Ladd Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Ladd Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Ladd Road due to a multitude of factors. These being the narrow and straight nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Ladd Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Ladd Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Lannan Road (Surfdale)

The speed limit on Lannan Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lannan Road connects to Surfdale Road to the north and Hamilton Road to south. This road provides access to residential properties. This section of Lannan Road is 0.53km in length</p> <p>Lannan Road is classified as an Access road under the one network road classification (ONRC). Lannan Road is a two-lane undivided road. There are no footpaths or cycle lanes along this section.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lannan Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>“Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10</li> <li><b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 144 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Lannan Road is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Lannan Road is in the range of 30 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Hamilton Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Esplanade:</b> 50km/h (proposed 30km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	530
Annual Daily Traffic (vpd)	144

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	144	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Lannan Road.*

Lannan Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected due to a multitude of factors. These being narrow and curved nature of the road, the severe roadside hazards, its access function and its existing mean operating speed (30km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Lannan Road in Surfdale, are not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lannan Road, the actual operating speeds from the MegaMaps tool are 30 km/h respectively.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Le Roy Road (Onetangi)

The speed limit on Le Roy Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Le Roy Road connects to First Avenue to its eastern end and to Second Avenue to its western end. This road provides access to residential properties. Le Roy Road is approximately 0.24 km in length.</p> <p>Le Roy Road is classified as an Access road under the one network road classification (ONRC). Le Roy Road is a two-lane undivided road. There are no pedestrian amenities or on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Le Roy Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Le Roy Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Le Roy Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>First Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Second Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	240
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Le Roy Road.*

Le Roy Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Le Roy Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Le Roy Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Le Roy Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Le Roy Road, the actual operating speeds from the Megamaps tool are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mako Street (Oneroa)

Mako Street, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Mako Street Between Church Bay Road and Ocean View Road
2. Section 2: Mako Street Between Church Bay Road and Tui Street

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Mako Street, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Mako Street connects to Church Bay Road to the south and Ocean View Road to the north. This road provides access to residential properties and a vineyard.	This section of Mako Street connects to Church Bay Road to the west and Tui Street to the east. This road provides access to residential properties and Alison Park.
	This section of Mako Street is 0.16km in length. It is classified as an Access road under the one network road classification (ONRC). Mako Street is a two-lane undivided road.	This section of Mako Street is 0.66km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Mako Street is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 0 crashes between 2016 and 2020. Therefore there are no Death and Serious Injury (DSI) crashes.	CAS records 1 crashes between 2016 and 2020. 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Mako Street were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".	
	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 683 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1601 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Mako Street are as follows: <ul style="list-style-type: none"> <li>50km/h Between Church Bay Road and Ocean View Road</li> <li>50km/h Between Church Bay Road and Tui Street</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Mako Street are as follows: <ul style="list-style-type: none"> <li>38.59km/h Between Church Bay Road and Ocean View Road</li> <li>38.59km/h Between Church Bay Road and Tui Street</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Church Bay Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Weka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tui Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Wattle Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	160	160
Annual Daily Traffic (vpd)	683	1601

- Section 1
  - The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural residential	1.5	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	683	1	1601	1.4

- Section 1: The Infrastructure Risk Rating Score is 1.94. For Rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.38. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80km/h Between Church Bay Road and Ocean View Road (Section 1)

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Church Bay Road and Tui Street (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 40km/h on Between Church Bay Road and Ocean View Road (Section 1),
- 30km/h on Between Church Bay Road and Tui Street (Section 2).

Mako Street – Section 1, between Church Bay Road and Ocean View Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 1 due to a multitude of factors. These being narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (38.59km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being narrow and curved nature of the road, the moderate roadside hazards, its Secondary Collector function. These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Mako Street in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Mako Street – Section 1, is 40 km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mako Street – Section 2.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Makora Avenue (Oneroa)

The speed limit on Makora Avenue, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Makora Avenue connects to Tawa Street to the north and Kiwi Street to the south/west. This road provides access to residential properties. Makora Avenue is approximately 1.04 km in length.
	Makora Avenue is classified as an Access road under the one network road classification (ONRC). Makora Avenue is a two-lane undivided road. There are no footpaths or cycle paths along this road. No on-street parking is provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Makora Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (207vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Makora Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Makora Avenue has a mean operating speed in the range of 25.33 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tawa Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Huia Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Kiwi Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1040
Annual Daily Traffic (vpd)	312

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	312	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Makora Avenue.*

Makora Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Makora Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Makora Avenue due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (25.33km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Makora Avenue in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Makora Avenue, the actual operating speeds from the traffic survey are 27.9km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Man O’War Bay Road (Waiheke Island)

Man O’War Bay Road, Waiheke Island has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Man O’War Bay Road connects to Waiheke Road to the southwest and Cowes Bay Road to the southeast. This road provides access to rural residential properties and vineyards. Man O’War Bay Road is approximately 10.190km in length.</p> <p>This section of Man O’War Bay Road is classified as an Access road under the one network road classification (ONRC). Man O’War Bay Road is Unsealed. There are no pedestrian and/or cyclist amenities provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.</p> <p>CAS records 9 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 8 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Man O’War Bay Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage. The IRR defines Remote rural as <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1</li> <li><b>Access density:</b> 2 to &lt;5</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 224 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Man O’War Bay Road is 80km/h.
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Man O’War Bay Road is 35.05km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Waiheke Road:</b> 50km/h (60km/h proposed)</li> <li><b>Orapiu Road:</b> 80km/h (60km/h proposed)</li> <li><b>Stonybatter Road:</b> 50km/h (40km/h proposed)</li> <li><b>Cowes Bay Road:</b> 80km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	10190
Annual Daily Traffic	224

The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**. Personal Risk score is 0. A Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Tortuous	6
Carriageway width (road lane + shoulder)	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Remote rural	1
Intersection density (per km)	<1	1
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	224	1

The Infrastructure Risk Rating Score is 2.49. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Man O'War Bay Road.*

Man O'War Bay Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected due to a multitude of factors. These being the narrow and tortuous nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (35.05km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 9 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 8 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Man O'War Bay Road in Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Man O'War Bay Road is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Manuka Road (Oneroa)

The speed limit on Manuka Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Manuka Road connects to Tui Street / Mako Street to the west and Moa Avenue to the east. This road provides access to residential properties. Manuka Road is approximately 0.32 km in length.</p> <p>Manuka Road is classified as a Secondary Collector road under the one network road classification (ONRC). Manuka Road is a two-lane undivided road. There are no footpaths or cycle paths along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 0 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Manuka Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Manuka Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Manuka Road has a mean operating speed in the range of 35 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tui Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Mako Street:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Moa Ave:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (m)	320
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0.63 and the Personal Risk score is 329.30. For Urban areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Manuka Road.*

A proposed speed limit of 30km/h was selected for Manuka Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (35km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>1</sup>.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 1 serious, 0 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Manuka Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Manuka Road, the actual operating speeds from the MegaMaps tool are 35 km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Marama Avenue (Surfdale)

The speed limit on Marama Avenue, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marama Avenue connects to Tetley Road / Beresford Avenue to the east and Surfdale Road to the west. This road provides access to residential properties. Marama Avenue is approximately 0.37 km in length.</p> <p>Marama Avenue is classified as an Access road under the one network road classification (ONRC). Marama Avenue is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marama Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Marama Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Marama Avenue has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Tetley Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Beresford Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	370
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	260	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Marama Avenue.*

Marama Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Marama Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Marama Avenue due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Marama Avenue in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Marama Avenue, the actual operating speeds from the MegaMaps tool are 20.46 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Marine View Road (Onetangi)

The speed limit on Marine View Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marine View Road connects to Onetangi Road to the west and Victoria Road South to the east. This road provides access to residential properties. Marine View Road is approximately 0.55 km in length.</p> <p>Marine View Road is classified as an Access road under the one network road classification (ONRC). Marine View Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marine View Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 245 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Marine View Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Marine View Road has a mean operating speed in the range of 25.74 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Trig Hill Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Eden Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Victoria Road South:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	550
Annual Daily Traffic (vpd)	245

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	245	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Marine View Road.*

Marine View Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Marine View Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Marine View Road due to a multitude of factors. These being the Narrow and Winding nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (25.74km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Marine View Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Marine View Road, the actual operating speeds from the MegaMaps tool are 25.74km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Matai Road (Oneroa)

The speed limit on Matai Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matai Road connects to Tui Street to the west and Moa Avenue to the east. This road provides access to residential properties. Matai Road is approximately 0.39 km in length.</p> <p>Matai Road is classified as an Secondary Collector road under the one network road classification (ONRC). Matai Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There is no on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matai Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Matai Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Matai Road has a mean operating speed in the range of 22.79 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tui Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Moa Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Puriri Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	390
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Matai Road.*

Matai Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Matai Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Matai Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (22.79km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Matai Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Matai Road, the actual operating speeds from the MegaMaps tool are 22.79km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Matapana Road (Palm Beach)

The speed limit on Matapana Road, Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Matapana Road connects to Hill Road to the south. This road provides access to residential properties. Matapana Road is approximately 0.65 km in length.</p> <p>Matapana Road is classified as an Access road under the one network road classification (ONRC). Matapana Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Matapana Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Matapana Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Matapana Road has a mean operating speed in the range of 23.12 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hill Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	650
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	100	1

The Infrastructure Risk Rating Score is 2.81. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Matapana Road.*

Matapana Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Matapana Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Matapana Road due to a multitude of factors. These being the Narrow and Tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (23.12km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Matapana Road in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Matapana Road, the actual operating speeds from the MegaMaps tool are 23.12km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – McIntosh Road (Oneroa)

The speed limit on McIntosh Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McIntosh Road connects to Queens Drive to the east. This road provides access to residential properties. McIntosh Road is approximately 0.09 km in length.</p> <p>McIntosh Road is classified as an Access road under the one network road classification (ONRC). McIntosh Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McIntosh Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on McIntosh Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McIntosh Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Queens Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	90
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	100	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of McIntosh Road.*

McIntosh Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of McIntosh Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for McIntosh Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on McIntosh Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for McIntosh Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – McMillan Road (Ōmiha)

The speed limit on McMillan Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>McMillan Road connects to Wairau Road to the west and O'Brien Road to the east. This road provides access to residential properties and provides beach access. McMillan Road is approximately 0.41 km in length.</p> <p>McMillan Road is classified as an Access road under the one network road classification (ONRC). McMillan Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for McMillan Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on McMillan Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of McMillan Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wairau Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>O'Brien Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Valley Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	412
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.46. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of McMillan Road.*

McMillan Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of McMillan Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for McMillan Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 1 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on McMillan Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for McMillan Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Miami Avenue (Surfdale)

The speed limit on Miami Avenue, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Miami Avenue connects to Hamilton Road to the north and Mitchell Road to the south. This road provides access to residential properties and commercial activity. Miami Avenue is approximately 0.31 km in length.</p> <p>Miami Avenue is classified as an Arterial road under the one network road classification (ONRC). Miami Avenue is a two-lane undivided road. There are footpaths and shared paths along this road. On-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Miami Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 7832 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and the traffic survey (7,961 vpd).
(i) any planned modification to the road; and	There are currently no planned modifications.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Miami Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Miami Avenue has a mean operating speed in the range of 37.85 km/h. Mean operating speed is 35.4km/h from recent traffic surveys.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hamilton Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Mitchell Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Alison Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Ocean Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	7832

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	7832	2.2

The Infrastructure Risk Rating Score is 2.86. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Miami Avenue.*

A proposed speed limit of 30km/h was selected for Miami Avenue due to a multitude of factors. These being the Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Arterial function and its existing mean operating speed (35.4km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Miami Avenue in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Miami Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Miro Road (Palm Beach)

The speed limit on Miro Road, Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Miro Road connects to Palm Road to its northern end. This road provides access to residential properties as well as Palm Beach. Miro Road is approximately 0.31 km in length.</p> <p>Miro Road is classified as a Secondary Collector road under the one network road classification (ONRC). Miro Road is a two-lane undivided road. There are no footpaths and cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Miro Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Miro Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Miro Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Palm Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 1.74. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Miro Road.*

Miro Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Miro Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Miro Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Miro Road in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Miro Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mitchell Road (Surfdale)

The speed limit on Mitchell Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mitchell Road connects to Miami Avenue to the west and to Alison Road to the east. This road provides access to residential properties and Mitchell Reserve. Mitchell Road is approximately 0.32 km in length.</p> <p>Mitchell Road is classified as a Secondary Collector road under the one network road classification (ONRC). Mitchell Road is a two-lane undivided road. There are footpaths and a cycle lane provided along this road. On-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mitchell Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8736 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey data (8790vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Mitchell Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Mitchell Road has a mean operating speed in the range of 31.59 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Miami Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Alison Road:</b> 50 km/h (proposed 50/30 km/h)</li> <li><b>Hooks Lane:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	320
Annual Daily Traffic (vpd)	8736

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	8736	2.2

The Infrastructure Risk Rating Score is 2.61. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Mitchell Road.*

A proposed speed limit of 30km/h was selected for Mitchell Road due to a multitude of factors. These being the Medium and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (31.59km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Mitchell Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Mitchell Road, the actual operating speeds from the MegaMaps tool are 31.59km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Moa Avenue (Oneroa)

The speed limit on Moa Avenue, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Moa Avenue connects to Ocean View Road to the north and The Esplanade to the south. This road provides access to residential properties, parks and beaches. Moa Avenue is approximately 0.57 km in length.</p> <p>Moa Avenue is classified as a Secondary Collector road under the one network road classification (ONRC). Moa Avenue is a two-lane undivided road. There are footpaths separated from the carriageway by grass berms along this road. There are no cycle lanes. On-street parking is not provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Moa Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1663 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Moa Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Moa Avenue has a mean operating speed in the range of 29.77 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>The Esplanade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Rata Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Nikau Road:</b> 60 km/h (proposed 30 km/h)</li> <li><b>Manuka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Matai Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Kiwi Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Ocean View Road:</b> 50 km/h (proposed 50 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	570
Annual Daily Traffic (vpd)	1663

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	1663	1.4

The Infrastructure Risk Rating Score is 2.41. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Moa Avenue.*

A proposed speed limit of 30km/h was selected for Moa Avenue due to a multitude of factors. These being the Medium and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (29.77km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Moa Avenue in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Moa Avenue, the actual operating speeds from the MegaMaps tool are 29.77km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Moana Avenue (Surfdale)

The speed limit on Moana Avenue, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Moana Avenue connects to Surfdale Road to the west and Park Road to the east. This road provides access to residential properties. Moana Avenue is approximately 0.28 km in length.</p> <p>Moana Avenue is classified as an Access road under the one network road classification (ONRC). Moana Avenue is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Moana Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Moana Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Moana Avenue has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Park Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Burrell Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	280
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	260	1

The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Moana Avenue.*

Moana Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Moana Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Moana Avenue due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46 km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Moana Avenue in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Moana Avenue, the actual operating speeds from the MegaMaps tool are 20.46 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Motukaha Road (Waiheke Island)

The speed limit on Motukaha Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Motukaha Road connects to Nick Johnstone Drive to the north. This road provides access to residential properties. Motukaha Road is approximately 0.45 km in length.</p> <p>Motukaha Road is classified as an Access road under the one network road classification (ONRC). Motukaha Road is two-lane undivided road. No footpaths or cycle lanes are provided along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Motukaha Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 683 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Motukaha Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Motukaha Road has a mean operating speed in the range of 35.01 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Nick Johnstone Drive:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	450
Annual Daily Traffic (vpd)	683

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	5 to <10	1.06
Traffic volume	683	1

The Infrastructure Risk Rating Score is 1.35. For Rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Motukaha Road.*

Motukaha Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Motukaha Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Motukaha Road due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its access function and its existing mean operating speed (35.01km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Motukaha Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Motukaha Road is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (80km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

## Speed Limit Review – Muritai Road (Ostend)

The speed limit on Muritai Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Muritai Road connects to Wharf Road to the west. This road provides access to residential properties. Muritai Road is approximately 0.16 km in length.</p> <p>Muritai Road is classified as an Access road under the one network road classification (ONRC). Muritai Road is Unsealed. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Muritai Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Muritai Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Muritai Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wharf Road:</b> 50 km/h (proposed 50 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	160
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.67. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Muritai Road.*

Muritai Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Muritai Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Muritai Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Muritai Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Muritai Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Natzka Road (Ostend)

The speed limit on Natzka Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Natzka Road connects to Ostend Road to the north and Ladd Road to the south. This road provides access to residential properties. Natzka Road is approximately 0.67 km in length.</p> <p>Natzka Road is classified as an Access road under the one network road classification (ONRC). Natzka Road is a two-lane undivided road. There are footpaths along this road. There are no cycle lanes. On-street parking is not provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Natzka Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Natzka Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Natzka Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ostend Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Calais Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Ladd Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	670
Annual Daily Traffic (vpd)	208

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	208	1

The Infrastructure Risk Rating Score is 2.75. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Natzka Road.*

Natzka Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Natzka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Natzka Road due to a multitude of factors. These being the Narrow and Winding nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Natzka Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Natzka Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Neil Avenue (Waiheke Island)

The speed limit on Neil Avenue, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Neil Avenue connects to Anzac Road to the west and Hunterville Road to the east. This road provides access to residential properties. Neil Avenue is approximately 0.04 km in length.</p> <p>Neil Avenue is unclassified under the one network road classification (ONRC). Neil Avenue is a two-way, unsealed, undivided road. There are no footpaths and cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Neil Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	No average daily traffic (ADT) data was available.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Neil Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This road has no available recorded mean operating speed.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Road:</b> 50km/h (40km/h proposed)</li> <li><b>Hunterville Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	40
Annual Daily Traffic (vpd)	n/a

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	n/a	1

The Infrastructure Risk Rating Score is 2.4. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Neil Avenue.*

Even though no mean operating speed data was available, given the function and nature of the road and the low operating speed of the adjoining road, Neil Avenue is likely to be a Self-Explaining road (despite the existing 50 km/h speed limit). Engineering up of Neil Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Neil Avenue due to a multitude of factors. These being the narrow and straight nature of the road and the moderate roadside hazards. These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Neil Avenue in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Neil Avenue is 40km/h which is aligned with the recommended safe and appropriate speed.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Nelson Avenue (Surfdale)

The speed limit on Nelson Avenue, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nelson Avenue connects to Bryan Road to west and Kennedy Road to the east. This road provides access to residential properties. Nelson Avenue is approximately 0.35 km in length.</p> <p>Nelson Avenue is classified as an Access road under the one network road classification (ONRC). Nelson Avenue is a two-lane undivided road, with a section of unsealed road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nelson Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 92 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road. The available traffic survey was 292vpd, which is higher than the MegaMaps volume but still indicates the road is lightly trafficked.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Nelson Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nelson Avenue has a mean operating speed in the range of 22 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bryan Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Wellington Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Kennedy Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	350
Annual Daily Traffic (vpd)	92

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	92	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Nelson Avenue.*

Nelson Avenue is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Nelson Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Nelson Avenue due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (22 km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Nelson Avenue in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

The speed management guide suggests 40 km/h as the safe and appropriate speed for Nelson Avenue. and the actual operating speed from the traffic survey is 39 km/h. However, this is noticeably higher than the Megamaps speed (22km/h). It is considered that the location of the 39km/h speed is not reflective of entire length of the road.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nepean Avenue (Waiheke Island)

The speed limit on Nepean Avenue, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nepean Avenue connects to Anzac Avenue to the east. This road provides access to residential access. Nepean Avenue is approximately 0.43 km in length.</p> <p>Nepean Avenue is classified as an Access road under the one network road classification (ONRC). Nepean Avenue is a two-way, unsealed road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nepean Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Nepean Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nepean Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	430
Annual Daily Traffic (vpd)	52

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume (vpd)	52	1

The Infrastructure Risk Rating Score is 2.63. For Rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Nepean Avenue.*

Nepean Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Nepean Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Nepean Avenue due to a multitude of factors. These being the narrow and winding nature of the road, the severe roadside hazards, its access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Nepean Avenue in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Nepean Avenue is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Newton Road (Oneroa)

The speed limit on Newton Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Newton Road connects to Queens Drive to the south. This road provides access to residential properties and Newton Reserve. Newton Road is approximately 0.4 km in length.</p> <p>Newton Road is classified as an Access road under the one network road classification (ONRC). Newton Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Newton Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 200 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Newton Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Newton Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Queens Drive:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	400
Annual Daily Traffic (vpd)	200

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume (vpd)	200	1

The Infrastructure Risk Rating Score is 1.92. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Newton Road.*

Newton Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Newton Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Newton Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Newton Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Newton Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Nick Johnstone Drive (Waiheke Island)

The speed limit on Nick Johnstone Drive, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nick Johnstone Drive connects to Church Bay Road to the east. This road provides access to residential properties and vineyards. Nick Johnstone Drive is approximately 1.86 km in length.</p> <p>Nick Johnstone Drive is classified as an Access road under the one network road classification (ONRC). Nick Johnstone Drive is a two-lane, undivided road. There are no footpaths or cycle lanes pedestrian along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nick Johnstone Drive were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 683 vehicles per day (vpd), whilst available traffic survey data shows 304vpd. It is possible that the traffic volumes along this road may be subject to seasonal variation due to the access to vineyards and the associated accommodation. To be conservative, the larger traffic volume has been adopted.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Nick Johnstone Drive is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nick Johnstone Drive has a mean operating speed in the range of 35 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Church Bay Road:</b> 50km/h (40km/h proposed)</li> <li><b>Motukaha Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1860
Annual Daily Traffic (vpd)	683

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	683	1

The Infrastructure Risk Rating Score is 1.49. For Rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Nick Johnstone Drive.*

Nick Johnstone Drive is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Nick Johnstone Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Nick Johnstone Drive due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its access function and its existing mean operating speed (35. km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as 'Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Nick Johnstone Drive in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Nick Johnstone Drive is 40 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

## Speed Limit Review – Nikau Road (Oneroa)

The speed limit on Nikau Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nikau Road connects to Tui Street to the west and Moa Avenue to the east. This road provides access to residential properties and a park. Nikau Road is approximately 0.51 km in length.</p> <p>Nikau Road is classified as an Secondary Collector road under the one network road classification (ONRC). Nikau Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Nikau Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Nikau Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Nikau Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tui Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Moa Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Ridge Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tahatai Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	510
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Nikau Road.*

Nikau Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Nikau Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Nikau Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Nikau Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Nikau Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## 2. Speed Limit Review – O'Brien Road (Ōmiha)

O'Brien Road, Ōmiha, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: O'Brien Road Between Te Whau Drive and Glen Brook Road
2. Section 2: O'Brien Road Between Onetangi Road and Te Whau Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of O'Brien Road, Ōmiha have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul>	
	Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	O'Brien Road connects to Te Whau Drive to the north and Pohutukawa Avenue / Glen Brook Road to the south. This road provides access to residential properties.	O'Brien Road connects to Onetangi Road to the north and Te Whau Drive to the south. This road provides access to residential properties, and Onetangi Sports Park.
	This section of O'Brien Road is 1.06km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). O'Brien Road is a two-lane undivided road.	This section of O'Brien Road is 1.72km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). O'Brien Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are no footpath or cycle lanes along this section.	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 8 crashes between 2016 and 2020: 0 fatal, 1 serious, 3 minor and 4 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for O'Brien Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Severe	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Severe
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> </ul> <b>Access density:</b> 2 to <5	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> </ul> <b>Access density:</b> 2 to <5
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 711 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 711 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on O'Brien Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Te Whau Drive and Glen Brook Road</li> <li>80km/h Between Onetangi Road and Te Whau Drive</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on O'Brien Road are as follows: <ul style="list-style-type: none"> <li>35.52km/h Between Te Whau Drive and Glen Brook Road</li> <li>43.22km/h Between Onetangi Road and Te Whau Drive</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Onetangi Road:</b> 60 km/h (proposed 60 km/h)</li> <li><b>Ostend Road:</b> 60 km/h (proposed 50 km/h)</li> <li><b>Gordons Road:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Margaret Reeve Lane:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Te Whau Drive:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Okoka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Valley Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>McMillan Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Pohutukawa Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Glenbrook Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	4
DSI crashes during the period	0	1
Corridor Length (m)	1060	1720
Annual Daily Traffic (vpd)	711	711

- Section 1
  - The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0.12. For Rural areas this corresponds to a Collective Risk band of **Medium-High**.
  - Personal Risk score is 44.81. A Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Winding	3.5	Curved	1.8
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	2 to <3	1.25	2 to <3	1.25
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd_)	711	1	711	1

- Section 1: The Infrastructure Risk Rating Score is 2.10. For Rural areas this corresponds to an IRR band of **High**.
- Section 2: The Infrastructure Risk Rating Score is 1.81. For Rural areas this corresponds to an IRR band of **Medium-High**.

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80km/h between Te Whau Drive and Glen Brook Road (Section 1),
- <80km/h between Onetangi Road and Te Whau Drive (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Te Whau Drive and Glen Brook Road (Section 1),
- 50km/h on Between Onetangi Road and Te Whau Drive (Section 2).

O'Brien Road – Section 1, between Te Whau Drive and Glen Brook Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Medium lane width and Winding nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (35.52km/h). These features also contribute to the roads "High" IRR score making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

O'Brien Road – Section 2, between Onetangi Road and Te Whau Drive, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 50km/h was selected, for Section 2 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (43.22km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Medium High and High due to the number of DSI crashes, making it a high-risk road<sup>3</sup>.

Crash history from WK NZTA's CAS database shows 8 crashes in the last 5 years including 0 fatal, 1 serious, 3 minor and 4 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on O'Brien Road in Ōmiha, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for O'Brien Road – Section 2, is 50km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests <80km/h as the safe and appropriate speed for O'Brien Road – Section 1, the actual operating speeds from the MegaMaps tool are 35.53km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Ocean Road (Surfdale)

Ocean Road, Surfdale, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Ocean Road between Jellicoe Parade and Miami Avenue
2. Section 2: Ocean Road between Jellicoe Parade and Junction Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Ocean Road, Surfdale have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul>	
	Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Ocean Road connects to Jellicoe Parade in the east and Miami Avenue in the west. This road provides access to residential properties.	Ocean Road connects to Jellicoe Parade in the west and Junction Road in the east. This road provides access to residential properties and some commercial activity.
	This section of Ocean Road is 1.1km in length. It is classified as an Access road under the one network road classification (ONRC). Ocean Road is a two-lane undivided road.	This section of Ocean Road is 0.67km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Ocean Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Ocean Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> High	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> </ul> <b>Access density:</b> 10 to <20	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5</li> </ul> <b>Access density:</b> 10 to <20
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 307 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 307 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Ocean Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Jellicoe Parade and Miami Avenue</li> <li>50km/h Between Jellicoe Parade and Junction Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Ocean Road are as follows: <ul style="list-style-type: none"> <li>20km/h Between Jellicoe Parade and Miami Avenue</li> <li>32.57km/h Between Jellicoe Parade and Junction Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Junction Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Pacific Parade:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Jellicoe Parade:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Wellington Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hamilton Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Bryan Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Miami Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	0
Corridor Length (m)	1100	670
Annual Daily Traffic (vpd)	307	307

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Winding	3.5
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	3 to <5	1.5	3 to <5	1.5
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume (vpd)	307	1	307	1

- Section 1: The Infrastructure Risk Rating Score is 2.13. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.22. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Jellicoe Parade and Miami Avenue (Section 1),
- 40km/h Between Jellicoe Parade and Junction Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Jellicoe Parade and Miami Avenue (Section 1),
- 40km/h on Between Jellicoe Parade and Junction Road (Section 2).

Ocean Road – Section 1, between Jellicoe Parade and Miami Avenue, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Narrow and Curved nature of the road, the High roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Ocean Road – Section 2, between Jellicoe Parade and Junction Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 2 due to a multitude of factors. These being Medium lane width and Winding nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (33km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Ocean Road in Surfdale, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Ocean Road – Section 2, is 40km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Ocean Road – Section 1, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ocean View Road (Oneroa)

Ocean View Road, Oneroa, is divided into the following section and outlined as follows<sup>1</sup>:

- Section 1: Ocean View Road Between the western end of Ocean View Road and 400m east of the western end of Ocean View Road
- Section 2: Ocean View Road Between 400m east of the western end of Ocean View Road and 50m south of Korora Road
- Section 3: Ocean View Road Between 50m south of Korora Road and Puriri Road
- Section 4: Ocean View Road Between Puriri Road and Pacific Parade

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Ocean View Road, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments			
	Section 1	Section 2	Section 3	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.			
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.			
(c) the function and use of the road; and	Ocean View Road between its western end and 400m east of its western end.  This road provides access to the Waiheke ferry terminal and surrounding parking.	Ocean View Road between 400m east of its western end and connect to Korora Road to the east.  This road provides access to residential properties and acts as a connector route from the ferry terminal to Oneroa.	Ocean View Road connects Korora Road to the west and Puriri Road to the east.  This road provides access to commercial properties and the Oneroa town centre.	Ocean View Road connects Puriri Road to the west to Pacific Parade to the east.  This road provides access to residential properties.

	This section of Ocean View Road is classified as an Arterial road under the one network road classification (ONRC). Ocean View Road is Two-lane undivided. This section is 0.400km in length.	This section of Ocean View Road is classified as an Arterial road under the one network road classification (ONRC). Ocean View Road is Two-lane undivided. This section is 1.00km in length.	This section of Ocean View Road is classified as an Arterial road under the one network road classification (ONRC). Ocean View Road is Two-lane undivided. This section is 1.50km in length.	This section of Ocean View Road is classified as an Arterial road under the one network road classification (ONRC). Ocean View Road is Two-lane undivided. This section is 1.09km in length.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.			
	CAS records 0 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 0 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 8 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 7 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 9 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 7 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 17 crashes between 2016 and 2020: 0 fatal, 1 serious, 6 minor and 10 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Ocean View Road were determined using a combination of site drive-over footage and geomaps information.			
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Moderate	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Moderate	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> High	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Severe

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.	The adjacent land use is classified as Commercial strip shopping using the drive over footage and the MegaMaps tool. The IRR defines Commercial strip shopping as “Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.”.	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information			
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1</li> <li><b>Access density:</b> 2 to &lt;5</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1</li> <li><b>Access density:</b> 10 to &lt;20</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1</li> <li><b>Access density:</b> 10 to &lt;20</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1</li> <li><b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4668 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 4668 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 7957 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 7957 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.			
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.			

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to

Current speed limit	The existing speed limit on Ocean View Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between the western end of Ocean View Road and 400m east of the western end of Ocean View Road</li> <li>50km/h Between 400m east of the western end of Ocean View Road and 50m south of Korora Road</li> <li>50km/h Between 50m south of Korora Road and Puriri Road</li> <li>50km/h Between Puriri Road and Pacific Parade</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Ocean View Road are as follows: <ul style="list-style-type: none"> <li>41.67km/h Between the western end of Ocean View Road and 400m east of the western end of Ocean View Road</li> <li>41.67km/h Between 400m east of the western end of Ocean View Road and 50m south of Korora Road</li> <li>48.42km/h Between 50m south of Korora Road and Puriri Road</li> <li>48.42km/h Between Puriri Road and Pacific Parade</li> </ul>
Existing Speed limits on adjoining roads	Ocean View Road is a spine road and main arterial through Waiheke Island. The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Mako Street:</b> 50km/h (40km/h proposed)</li> <li><b>Kuaka Road:</b> 50km/h (30km/h proposed)</li> <li><b>Kororo Road:</b> 50km/h (30km/h proposed)</li> <li><b>Oue Road:</b> 50km/h (30km/h proposed)</li> <li><b>Oneroa Village Lane:</b> 50km/h (30km/h proposed)</li> <li><b>Weka Road:</b> 50km/h (30km/h proposed)</li> <li><b>Tui Street:</b> 50km/h (30km/h proposed)</li> <li><b>Puriri Road:</b> 50km/h (30km/h proposed)</li> <li><b>Moa Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Goodwin Avenue:</b> 50km/h (40km/h proposed)</li> <li><b>Pacific Parade:</b> 50km/h (40km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3	Section 4
Crash Analysis Period (years)	5	5	5	5
Total injury crashes during period	0	1	2	7
DSI crashes during the period	0	0	0	1
Corridor Length (m)	400	1000	1500	1090
Annual Daily Traffic (vpd)	4668	4668	7957	7957

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 3
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 4
  - The Collective Risk score is 0.18. For Urban areas this corresponds to a Collective Risk band of **Medium-High**.

- Personal Risk score is 6.3. A Personal Risk band of **Medium**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3		Section 3	
	Category	Risk Score	Category	Category	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium, Narrow	1.45	Medium, Very narrow	1.79	Medium, Very narrow	1.79	Medium, Very narrow	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43	High	2.28	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3	Commercial strip shopping	5	Urban residential	3
Intersection density (per km)	<1	1	<1	1	<1	1	<1	1
Access density (per km)	2 to <5	1.03	10 to <20	1.1	10 to <20	1.1	10 to <20	1.1
Traffic volume	4668	1.4	4668	1.4	7957	2.2	7957	2.2

- 30km/h on Between the western end of Ocean View Road and 400m east of the western end of Ocean View Road (Section 1),
- 50km/h on Between 400m east of the western end of Ocean View Road and 50m south of Korora Road (Section 2),
- 30km/h on Between 50m south of Korora Road and Puriri Road (Section 3).
- 50km/h on Between Puriri Road and Pacific Parade (Section 4).

A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being medium lane width and curved nature of the road, the Moderate roadside hazards, its Arterial function and high pedestrian/cyclist demand near ferry terminal and carparks. These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

It's recommended to remain the 50km/h for Section 2 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, and its Arterial function. These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively. Crash history from WK NZTA's CAS database shows 8 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 7 non-injury crashes.

A proposed speed limit of 30km/h was selected, for Section 3 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the High roadside hazards, its Arterial function and high pedestrian/cyclist demand at town centre. These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as 'Low and Low respectively. Crash history from WK NZTA's CAS database shows 9 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 7 non-injury crashes.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

It's recommended to remain the 50km/h, for Section 4 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the High roadside hazards, its Arterial function and its existing mean operating speed (48.42km/h). These features also contribute to the roads "Medium" IRR score and due to adverse crash history on the road. The collective and personal risk of this road are classified as 'Medium-high and Medium respectively due to the number of DSI crashes, making it a high-risk road<sup>2</sup>. Crash history from WK NZTA's CAS database shows 17 crashes in the last 5 years including 0 fatal, 1 serious, 6 minor and 10 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Ocean View Road for section 1 and 3, are not considered to be a safe and appropriate speed limit for this road.

We have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

- Section 1: The Infrastructure Risk Rating Score is 1.87. For Urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2: The Infrastructure Risk Rating Score is 1.90. For Urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 3: The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 4: The Infrastructure Risk Rating Score is 2.30. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between the western end of Ocean View Road and 400m east of the western end of Ocean View Road (Section 1),
- 50km/h Between 400m east of the western end of Ocean View Road and 50m south of Korora Road (Section 2),
- 40km/h Between 50m south of Korora Road and Puriri Road (Section 3)
- 50km/h on Between Puriri Road and Pacific Parade (Section 4).

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Okoka Road (Ōmiha)

The speed limit on Okoka Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Okoka Road connects to O'Brien Road to the north and Fairview Crescent / Glen Brook Road to the south. This road provides access to residential properties. Okoka Road is approximately 0.77 km in length.</p> <p>Okoka Road is classified as an Access road under the one network road classification (ONRC). Okoka Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Okoka Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Okoka Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Okoka Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>O'Brien Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Fairview Crescent:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Glen Brook Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	0
Corridor Length (m)	770
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.73. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Okoka Road.*

Okoka Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Okoka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Okoka Road due to a multitude of factors. These being the Narrow and Tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Okoka Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Okoka Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Omiha Road (Ōmiha)

The speed limit on Omiha Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Omiha Road connects to Glen Brook Road to the west and Upland Road to the east. This road provides access to residential properties and Omiha Beach Reserve. Omiha Road is approximately 0.42 km in length.</p> <p>Omiha Road is classified as a Secondary Collector road under the one network road classification (ONRC). Omiha Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Omiha Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Omiha Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Omiha Road has a mean operating speed in the range of 20.5 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Glen Brook Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Upland Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	421
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Omiha Road.*

Omiha Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Omiha Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Omiha Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20.5km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Omiha Road in Omiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Omiha Road, the actual operating speeds from the MegaMaps tool are 20.5km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Oneroa Village Lane (Oneroa)

The speed limit on Oneroa Village Lane, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oneroa Village Lane connects to Ocean View Road to the north and south. This road provides access to commercial activities. Oneroa Village Lane is approximately 0.21 km in length.</p> <p>Oneroa Village Lane is classified as an Access road under the one network road classification (ONRC). Oneroa Village Lane is a one-way road. There are no footpaths or cycle lanes along this road. There is car parking available behind the shops.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oneroa Village Lane were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial strip shopping using the drive over footage and the MegaMaps tool. The IRR defines Commercial strip shopping as <i>“Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.”</i>
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Oneroa Village Lane is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oneroa Village Lane has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	210
Annual Daily Traffic (vpd)	52

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	One-way	1
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial strip shopping	5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	52	1

The Infrastructure Risk Rating Score is 1.94. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Oneroa Village Lane.*

Oneroa Village Lane is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Oneroa Village Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Oneroa Village Lane due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Oneroa Village Lane in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Oneroa Village Lane is 30km/h which is below the recommended safe and appropriate speed from Speed Management Guide. The proposed speed limit is consistent with the adjoin street.

Therefore we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Onetangi Road (Waiheke Island)

Onetangi Road, Waiheke Island, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Onetangi Road Between O'Brien Road and Waiata Road
2. Section 2: Onetangi Road Between Waiata Road and Waiheke Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Onetangi Road, Waiheke Island have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Onetangi Road connects to connects to Ostend Road to the west and Waiata Road to the east. This road provides access to residential properties and some recreational/commercial activities.	Onetangi Road connects to connects to Waiata Road to the west and Waiheke Road to the east. This road provides access to residential properties and some recreational/commercial activities.
	This section of Onetangi Road is 1.78km in length. It is classified as a Primary Collector road under the one network road classification (ONRC). Onetangi Road is a two-lane undivided road.	This section of Onetangi Road is 0.95km in length. It is classified as a Primary Collector road under the one network road classification (ONRC). Onetangi Road is a two-lane undivided road
	This section is a two-way, two-lane, undivided road. There are pedestrian/cyclist amenities including footpath and a cycle lane.	This section is a two-way, two-lane, undivided road. There are pedestrian/cyclist amenities including footpath and a cycle lane.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 17 crashes between 2016 and 2020: 0 fatal, 0 serious, 5 minor and 12 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 5 crashes between 2016 and 2020. 0 fatal, 0 serious, 2 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Onetangi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane, and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane, and very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	
	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> </ul> <p><b>Access density:</b> 10 to &lt;20</p>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> </ul> <p><b>Access density:</b> 10 to &lt;20</p>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5616 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 5616 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Onetangi Road are as follows: <ul style="list-style-type: none"> <li>60km/h Between O'Brien Road and Waiata Road</li> <li>50km/h Between Waiata Road and Waiheke Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Onetangi Road are as follows: <ul style="list-style-type: none"> <li>61.72km/h Between O'Brien Road and Waiata Road</li> <li>44.67km/h Between Waiata Road and Waiheke Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Ostend Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>O'Brien Road:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Waiata Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Totara Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Trig Hill Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Sea View Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Eden Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Fourth Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Waiheke Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	5	2
DSI crashes during the period	0	0
Corridor Length (m)	1780	950
Annual Daily Traffic (vpd)	5616	5616

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	2 to <3	1.25	2 to <3	1.25
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume (vpd_)	5616	1.4	5616	1.4

- Section 1: The Infrastructure Risk Rating Score is 1.99. For Urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2: The Infrastructure Risk Rating Score is 1.99. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 50km/h Between O'Brien Road and Waiata Road (Section 1),
- 50km/h Between Waiata Road and Waiheke Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60km/h on Between O'Brien Road and Waiata Road (Section 1),
- 50km/h on Between Waiata Road and Waiheke Road (Section 2).

Onetangi Road – Section 1, between O'Brien Road and Waiata Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 60km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 60km/h was selected, for Section 1 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Primary Collector function and its existing mean operating speed (61.72km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 17 crashes in the last 5 years including 0 fatal, 0 serious, 5 minor and 12 non-injury crashes.

Onetangi Road – Section 2, Between Waiata Road and Waiheke Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 50km/h was selected, for Section 1 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Primary Collector function and its existing mean operating speed (44.67km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Onetangi Road in Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The recommended safe and appropriate speed limit for Onetangi Road – Section 1, is 60 km/h which is higher than the Speed Management Guide recommendation (50km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

The proposed safe and appropriate speed limit(s) for Onetangi Road – Section 2, is 50km/h which is aligned with the recommended safe and appropriate speed.

**Speed Limit Review – Orapiu Road (Waiheke Island)**

The speed limit on Orapiu Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Orapiu Road connects to Awaawaroa Road to the west and Anzac Avenue to the east. This road provides access to residential properties and connects to other rural roads. Orapiu Road is approximately 7.97 km in length.</p> <p>Orapiu Road is classified as an Secondary Collector road under the one network road classification (ONRC). Orapiu Road is a two-lane undivided road. No pedestrian and/or cyclist amenities are provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Orapiu Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane and Very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage and the MegaMaps tool. The IRR defines Remote rural as "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 600 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road. However, traffic survey data recorded 334vpd. It is possible that the traffic volumes along this road may be subject to seasonal variation due to the access to vineyards and the associated accommodation. To be conservative, the larger traffic volume has been adopted.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Orapiu Road is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Orapiu Road has a mean operating speed in the range of 48.52 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Awaawaroa Road:</b> 80km/h (40km/h proposed)</li> <li>• <b>Anzac Road:</b> 50km/h (40km/h proposed)</li> <li>• <b>Cowes Bay Road:</b> 80km/h (40km/h proposed)</li> <li>• <b>Waiheke Road:</b> 50km/h (60km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	7970
Annual Daily Traffic (vpd)	600

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Medium lane, Very narrow lane	1.79
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Remote rural	1
Intersection density (per km)	<1	1
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	600	1

The Infrastructure Risk Rating Score is 2.06. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60km/h for the full length of Orapiu Road.*

Orapiu Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Orapiu Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60km/h was selected for Orapiu Road due to a multitude of factors. These being the medium width and tortuous nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (48.52km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Orapiu Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Orapiu Road is 60km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Ostend Road (Ostend)**

Ostend Road, Ostend, is divided into the following section and outlined as follows<sup>1</sup>:

1. Section 1: Ostend Road Between Belgium Street and Erua Road
2. Section 2: Ostend Road Between Wharf Road and Belgium Street
3. Section 3: Ostend Road Between Erua Road and O'Brien Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Ostend Road, Ostend have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Ostend Road – Section 1, connects to Belgium Street to the west and Erua Street to the east. This road provides access to residential properties and some services/commercial activities.	Ostend Road – Section 2, connects to Wharf Street to the west and Belgium Street to the east. This road provides access to residential properties.	Ostend Road – Section 3, connects to Erua Street to the west and O'Brien Street to the east. This road provides access to residential properties.
	This section of Ostend Road is 0.90km in length. It is classified as a Primary Collector road under the one network road classification (ONRC). Ostend Road is a two-lane undivided road.	This section of Ostend Road is 0.70km in length. It is classified as a Primary Collector road under the one network road classification (ONRC). Ostend Road is a two-lane undivided road.	This section of Ostend Road is 0.63km in length. It is classified as an Arterial road under the one network road classification (ONRC). Ostend Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths in some places along this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.		
	CAS records 11 crashes between 2016 and 2020: 0 fatal, 1 serious, 2 minor and 8 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 4 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Ostend Road were determined using a combination of site drive-over footage and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane, narrow shoulder</li> </ul> <p><b>Roadside hazards (in both directions):</b> Moderate</p>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10</li> <li><b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10</li> <li><b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10</li> <li><b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4317 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 4317 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 7475 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.		

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Ostend Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Belgium Street and Eura Road</li> <li>50km/h Between Wharf Road and Belgium Street</li> <li>60km/h Between Erua Road and O'Brien Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Ostend Road are as follows: <ul style="list-style-type: none"> <li>50.47km/h Between Belgium Street and Eura Road</li> <li>29.15km/h Between Wharf Road and Belgium Street</li> <li>60.64km/h Between Erua Road and O'Brien Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Onetangi Road:</b> 60 km/h (proposed 60 km/h)</li> <li><b>O'Brien Road:</b> 80 km/h (proposed 50 km/h)</li> <li><b>Erua Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tahi Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Calais Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Sea View Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Natzka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Whakarite Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Belgium Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Putiki Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Ladd Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Albert Crescent:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Wharf Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	3	0	0
DSI crashes during the period	1	0	0
Corridor Length (m)	900	700	630
Annual Daily Traffic (vpd)	4317	4317	7475

- Section 1
  - The Collective Risk score is 0.22. For Urban areas this corresponds to a Collective Risk band of **High**.
  - Personal Risk score is 14.10. A Personal Risk band of **High**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

- Section 3
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Medium lane, very narrow shoulder	1.79	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3	>20	1.3
Traffic volume (vpd)	4317	1.4	4317	1.4	7475	2.2

- Section 1: The Infrastructure Risk Rating Score is 2.38. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.38. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 3: The Infrastructure Risk Rating Score is 2.58. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Belgium Street and Eura Road (Section 1),
- 50km/h Between Wharf Road and Belgium Street (Section 2),
- 50km/h Between Erua Road and O'Brien Road (Section 3)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50km/h on Between Belgium Street and Eura Road (Section 1),
- 30km/h on Between Wharf Road and Belgium Street (Section 2),
- 50km/h on Between Erua Road and O'Brien Road (Section 3).

Ostend Road – Section 1, between Belgium Street and Eura Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50km/h was selected, for Section 1 due to a multitude of factors. These being Narrow lane width and Curved nature of the road, the Moderate roadside hazards, its Primary Collector function and its existing mean operating speed (50.47km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>2</sup>.

Crash history from WK NZTA's CAS database shows 11 crashes in the last 5 years including 0 fatal, 1 serious, 2 minor and 8 non-injury crashes.

Ostend Road – Section 2, between Wharf Road and Belgium Street, is a Self-Explaining road as the mean operating speed is already below or near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Primary Collector function and its existing mean operating speed (29.15km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Ostend Road – Section 3, between Erua Road and O'Brien Road, is a Self-Explaining road as the mean operating speed is already below or near the proposed safe and appropriate speeds, despite the existing 60km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 50km/h was selected, for Section 3 due to a multitude of factors. These being Medium lane width and Curved nature of the road, the Moderate roadside hazards, its Arterial function and its existing mean operating speed (60.64km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>3</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 4 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Ostend Road in Ostend, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Ostend Road – Section 3, is 50km/h which is aligned with the recommended safe and appropriate speed.

The recommended safe and appropriate speed limit for Ostend Road – Section 1, is 50km/h which is higher than the Speed Management Guide recommendation (40 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds.

While the speed management guide suggests 50km/h as the safe and appropriate speed for Ostend Road – Section 2, the actual operating speeds from the MegaMaps tool are 29.15km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Oue Road (Oneroa)

The speed limit on Oue Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Oue Road connects to Ocean View Road to the north and Kuaka Road to the south. This road provides access to residential properties and some commercial activity. Oue Road is approximately 0.16 km in length.</p> <p>Oue Road is classified as a Secondary Collector road under the one network road classification (ONRC). Oue Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Oue Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Oue Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Oue Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Oneroa Village Lane:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Kuaka Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	160
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Oue Road.*

Oue Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Oue Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Oue Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Oue Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Oue Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Pacific Parade (Oneroa/Surfdale)

The speed limit on Pacific Parade, Oneroa/Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pacific Parade connects to Surfdale Road to the west and Junction Road / Queens Drive / Ocean Road to the east. This road provides access to residential properties. Pacific Parade is approximately 1.03 km in length.</p> <p>Pacific Parade is classified as a Secondary Collector road under the one network road classification (ONRC). Pacific Parade is a two-lane undivided road. There are footpaths provided on some parts of this road. There are cycle lanes along this road. On-street parking is not provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 4 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Pacific Parade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Pacific Parade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Pacific Parade has a mean operating speed in the range of 43.11 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Frank Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Park Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Short Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>George Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Queens Drive:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Junction Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Ocean Road:</b> 50 km/h (proposed 50 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1030
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Pacific Parade.*

Pacific Parade is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Pacific Parade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Pacific Parade due to a multitude of factors. These being the Narrow and Curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (43.11km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 4 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Pacific Parade in Oneroa/Surfdale, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Pacific Parade is 40 km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Pah Road (Onetangi)

The speed limit on Pah Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Pah Road connects to Sea View Road to the west. This road provides access to residential properties. Pah Road is approximately 0.14 km in length.
	Pah Road is classified as an Access road under the one network road classification (ONRC). Pah Road is an Unsealed Road. There are no footpaths or cycle lanes along this road. On-street parking is not provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Pah Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Pah Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Pah Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Sea View Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	140
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.41. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Pah Road.*

Pah Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Pah Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Pah Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Pah Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Pah Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Palm Road (Palm Beach)

The speed limit on Palm Road, Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Palm Road connects to Miro Road to the north/west and to Hill Road to the south. This road provides access to residential properties, Palm Beach Reserve and provides beach access. Palm Road is approximately 0.79 km in length.</p> <p>Palm Road is classified as a Secondary Collector road under the one network road classification (ONRC). Palm Road is a two-lane undivided road. There are footpaths along and on-street parking provisions along this road. There are no cycle lanes provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Palm Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 960 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (960vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Palm Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Palm Road has a mean operating speed in the range of 29.69 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Miro Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Tiri View Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hill Road:</b> 50 km/h (proposed 30/40 km/h)</li> <li><b>Bay Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Te Toki Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	790
Annual Daily Traffic (vpd)	960

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	960	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Palm Road.*

Palm Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Palm Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Palm Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (29.69km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 50 km/h on Palm Road in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Palm Road, the actual operating speeds from the MegaMaps tool are 29.69km/h.

Therefore we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Park Point Drive (Waiheke Island)

The speed limit on Park Point Drive, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Park Point Drive connects to Walter Frank Drive to the north. This road provides access to residential properties. Park Point Drive is approximately 1.03 km in length.
	Park Point Drive is classified as an Access road under the one network road classification (ONRC). Park Point Drive is two-lane, undivided road. There are no footpaths or cycle lanes along this road. On-street parking is not provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Park Point Drive were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Minor</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage and the MegaMaps tool. The IRR defines Remote rural as "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 54 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Park Point Drive is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Park Point Drive has a mean operating speed in the range of 30 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Walter Frank Drive:</b> 50km/h (40km/h proposed)</li> <li><b>Cable Bay Lane:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1030
Annual Daily Traffic (vpd)	54

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Minor	0.67
Adjacent land use	Remote rural	1
Intersection density (per km)	<1	1
Access density (per km)	5 to <10	1.06
Traffic volume	54	1

The Infrastructure Risk Rating Score is 1.22. For Rural areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Park Point Drive.*

Park Point Drive is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Park Point Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Park Point Drive due to a multitude of factors. These being the narrow and winding nature of the road, the minor roadside hazards, its Access function and its existing mean operating speed (30km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Park Point Drive in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Park Point Drive is 40km/h which is aligned with the recommended safe and appropriate speed.

## Speed Limit Review – Park Road (Surfdale)

The speed limit on Park Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Park Road connects to Surfdale Road to the south and Pacific Parade to the north. This road provides access to residential properties. Park Road is approximately 0.47 km in length.</p> <p>Park Road is classified as an Access road under the one network road classification (ONRC). Park Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Park Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Park Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Park Road has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Surfdale Road:</b> 50km/h (50km/h proposed)</li> <li><b>Tetley Road:</b> 50km/h (30km/h proposed)</li> <li><b>Fisher Street:</b> 50km/h (30km/h proposed)</li> <li><b>Moana Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Pacific Parade:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	470
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	260	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Park Road.*

Park Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Park Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Park Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Park Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Park Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Pohutukawa Avenue (Ōmiha)

The speed limit on Pohutukawa Avenue, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Pohutukawa Avenue connects to Glen Brook Road to the north. This road provides access to residential properties. Pohutukawa Avenue is approximately 0.32 km in length.</p> <p>Pohutukawa Avenue is classified as an Access road under the one network road classification (ONRC). Pohutukawa Avenue is an unsealed road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Pohutukawa Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Pohutukawa Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Pohutukawa Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Glen Brook Road:</b> 50km/h (30km/h proposed)</li> <li><b>O'Brien Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	315
Annual Daily Traffic (vpd)	50

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	5 to <10	1.06
Traffic volume	50	1

The Infrastructure Risk Rating Score is 2.63. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Pohutukawa Avenue.*

Pohutukawa Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Pohutukawa Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Pohutukawa Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Pohutukawa Avenue in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Pohutukawa Avenue, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Potai Street (Ostend)

The speed limit on Potai Street, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Potai Street connects to Crescent Road East to the west and Whakarite Road and Taraire Street to the east. This road provides access to residential properties and is a short connecting road. Potai Street is approximately 0.08 km in length.</p> <p>Potai Street is classified as an Access road under the one network road classification (ONRC). Potai Street is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Potai Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Potai Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Potai Street has a mean operating speed in the range of 34.81 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Crescent Road East:</b> 50km/h (30km/h proposed)</li> <li><b>Whakarite Road:</b> 50km/h (30km/h proposed)</li> <li><b>Taraire Street:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	80
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.27. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Potai Street.*

A proposed speed limit of 30km/h was selected for Potai Street due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (34.81km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Potai Street in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Potai Street, the actual operating speeds from the MegaMaps tool are 35 km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Poto Road (Ostend)

The speed limit on Poto Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Poto Road connects to Tahi Road to the west and Erua Road to the east. This road provides access to commercial and industrial properties. Poto Road is approximately 0.1 km in length.</p> <p>Poto Road is classified as an Secondary Collector road under the one network road classification (ONRC). Poto Road is a two-lane undivided road. There are some footpaths and on-street parking provisions available. No cycle lanes are provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Poto Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using the drive over footage and the MegaMaps tool. The IRR defines Commercial big box as <i>"Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Poto Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Poto Road has a mean operating speed in the range of 25 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Tahi Road:</b> 50km/h (30km/h proposed)</li> <li><b>Erua Road:</b> 50km/h (30km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	100
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial big box	4
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.39. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Poto Road.*

Poto Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Poto Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Poto Road due to a multitude of factors. These being the Narrow and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (25km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Poto Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Poto Road, the actual operating speeds from the MegaMaps tool are 25km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Puriri Road (Oneroa)

The speed limit on Puriri Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Puriri Road connects to Beach Parade to the north and Matai Road to the south. This road provides access to residential properties and beach access. Puriri Road is approximately 0.27 km in length.
	Puriri Road is classified as an Access road under the one network road classification (ONRC). Puriri Road is a two-lane undivided road. Footpaths are provided along the road but there are no cycle paths. No on-street parking are provided.
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Puriri Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Puriri Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Puriri Road has a mean operating speed in the range of 23 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Matai Road:</b> 50km/h (30km/h proposed)</li> <li><b>Ocean View Road:</b> 50km/h (30/50km/h proposed)</li> <li><b>Beach Parade:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	270
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	104	1

The Infrastructure Risk Rating Score is 2.47. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Puriri Road.*

Puriri Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Puriri Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Puriri Road due to a multitude of factors. These being the narrow and straight nature of the road, the High roadside hazards, its Access function and its existing mean operating speed (23km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Puriri Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Puriri Road, the actual operating speeds from the MegaMaps tool are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Putiki Road (Ostend)

The speed limit on Putiki Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Putiki Road connects to Wharf Road to the west and Ostend Road to the east. This road provides access to residential properties. Putiki Road is approximately 0.45 km in length.</p> <p>Putiki Road is classified as an Secondary Collector road under the one network road classification (ONRC). Putiki Road is a two-lane undivided road. Footpaths are provided along this road. No cycle lanes or on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Putiki Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 648 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (348vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Putiki Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Putiki Road has a mean operating speed in the range of 43.55 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wharf Road:</b> 50km/h (50km/h proposed)</li> <li><b>Ostend Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	450
Annual Daily Traffic (vpd)	648

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	648	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Putiki Road.*

A proposed speed limit of 30km/h was selected for Putiki Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (43.55km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Putiki Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Putiki Road, the actual operating speeds from the MegaMaps tool are 44km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Queens Drive (Oneroa)

Queens Drive, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Queens Drive Between Goodwin Avenue and eastern end of Goodwin Avenue
2. Section 2: Queens Drive Between the eastern end of Goodwin Avenue and Junction Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Queens Drive, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Queens Drive connects to the eastern end of Goodwin Avenue to the western end to the west. This road provides access to residential properties.	This section of Queens Drive connects to Goodwin Avenue to the west and Junction Road / Ocean Road / Pacific Parade to the east. This road provides access to residential properties.
	This section of Queens Drive is 0.8km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Queens Drive is a two-lane undivided road.	This section of Queens Drive is 0.9km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Queens Drive is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Queens Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	
	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Queens Drive are as follows: <ul style="list-style-type: none"> <li>50km/h Between Goodwin Avenue and eastern end of Goodwin Avenue</li> <li>50km/h Between the eastern end of Goodwin Avenue and Junction Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Queens Drive are as follows: <ul style="list-style-type: none"> <li>33.6km/h Between Goodwin Avenue and eastern end of Goodwin Avenue</li> <li>33.6km/h Between the eastern end of Goodwin Avenue and Junction Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Mcintosh Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Newton Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Goodwin Avenue:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Hekerua Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hauraki Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Frank Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Karaka Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Pacific Parade:</b> 50 km/h (proposed 50 km/h)</li> <li><b>Ocean Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Junction Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	800	900
Annual Daily Traffic (vpd)	520	520

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Goodwin Avenue and eastern end of Goodwin Avenue (Section 1),
- 40km/h Between the eastern end of Goodwin Avenue and Junction Road (Section 2)

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 30km/h on Between Goodwin Avenue and eastern end of Goodwin Avenue (Section 1),
- 40km/h on Between the eastern end of Goodwin Avenue and Junction Road (Section 2).

Queens Drive – Section 1, between Goodwin Avenue and eastern end of Goodwin Avenue, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (33.6km/h). These features also contribute to the roads “Medium-High” IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA’s CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

Queens Drive – Section 2, between Goodwin Avenue and Junction Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 2 due to a multitude of factors. These being the narrow and curved nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (33.6km/h). These features also contribute to the roads “Medium-High” IRR score, making it a high risk road. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA’s CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Queens Drive in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Queens Drive – Section 2 is 40km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Queens Drive – Section 1, the actual operating speeds from the MegaMaps tool are 33.6km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Quelch Road (Onetangi)**

The speed limit on Quelch Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Quelch Road connects to Seventh Avenue to the west. This road provides access to residential properties. Quelch Road is approximately 0.13 km in length.</p> <p>Quelch Road is classified as an Access road under the one network road classification (ONRC). Quelch Road is unsealed. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Quelch Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Quelch Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Quelch Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Seventh Avenue:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	130
Annual Daily Traffic (vpd)	4

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	4	1

The Infrastructure Risk Rating Score is 2.67. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Quelch Road.

Quelch Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Quelch Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Quelch Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Quelch Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Quelch Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Rata Street (Oneroa)**

The speed limit on Rata Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rata Street connects to Tui Street the west and Moa Avenue to the east. This road provides access to residential properties. Rata Street is approximately 0.42 km in length.</p> <p>Rata Street is classified as an Secondary Collector road under the one network road classification (ONRC). Rata Street is a two-lane undivided road. There are no footpaths or cycle lanes on this road. On-street parking is not provided. However, there are bus stops located between Moa Avenue and Tui Street.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rata Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Rata Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rata Street has a mean operating speed in the range of 20.7 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tui Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Moa Avenue:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	420
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 1.74. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Rata Street.*

Rata Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Rata Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Rata Street due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20.7km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Rata Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Rata Street, the actual operating speeds from the MegaMaps tool are 21km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Ridge Road (Oneroa)

The speed limit on Ridge Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Ridge Road connects to Wattle Road to the west and Nikau Road to the east. This road provides access to residential properties. Ridge Road is approximately 0.5 km in length.</p> <p>Ridge Road is classified as an Secondary Collector road under the one network road classification (ONRC). Ridge Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. On-street parking is not provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Ridge Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Ridge Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Ridge Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wattle Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Nikau Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	500
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 1.74. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Ridge Road.

Ridge Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Ridge Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Ridge Road due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20 km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Ridge Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Ridge Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Rothschild Terrace (Waiheke Island)**

The speed limit on Rothschild Terrace, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rothschild Terrace connects to Te Whau Drive to the south. This road provides access to residential properties. Rothschild Terrace is approximately 0.33 km in length.</p> <p>Rothschild Terrace is classified as an Access road under the one network road classification (ONRC). Rothschild Terrace is a two-lane, undivided road. There are no footpaths or cycle lanes on this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rothschild Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Rothschild Terrace is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rothschild Terrace has a mean operating speed in the range of 27 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Te Whau Drive:</b> 80km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	330
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 1.63. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 50km/h for the full length of Rothschild Terrace.*

Rothschild Terrace is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Rothschild Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50km/h was selected for Rothschild Terrace due to a multitude of factors. These being the Medium width and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (27km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Rothschild Terrace in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Rothschild Terrace is 50 km/h which is aligned with the speed limit recommended by the Speed Management Guide (<80km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Scotts Terrace (Onetangi)**

The speed limit on Scotts Terrace, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Scotts Terrace connects to Victoria Road North to the northwest and Victoria Road South to the southeast. This road provides access to residential properties. Scotts Terrace is approximately 0.33 km in length.</p> <p>Scotts Terrace is classified as an Access road under the one network road classification (ONRC). Scotts Terrace is an unsealed road. There are no footpaths or cycle lanes on this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Scotts Terrace were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Scotts Terrace is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Scotts Terrace has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road North:</b> 50km/h (30km/h proposed)</li> <li>• <b>Victoria Road South:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	330
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	104	1

The Infrastructure Risk Rating Score is 2.96. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Scotts Terrace.

Scotts Terrace is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Scotts Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Scotts Terrace due to a multitude of factors. These being the narrow and curved nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Scotts Terrace in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Scotts Terrace, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Sea View Road (Ostend)**

Sea View Road, Ostend, is divided into the following section and outlined as follows<sup>1</sup>:

1. Section 1: Sea View Road between Ostend Road and Erua Road
2. Section 2: Sea View Road between Erua Road and Onetangi Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Sea View Road, Ostend have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Sea View Road connects to Ostend Road to the south/west and Erua Road to the west. This road provides access to Waiheke Primary School, and residential properties.	This section of Sea View Road connects To Erua Road to the west and Onetangi Road / Eden Terrace to the east. This road provides access to residential properties.
	This section of Sea View Road is 0.88km in length. It is classified as an Access road under the one network road classification (ONRC). Sea View Road is a two-lane undivided road.	This section of Sea View Road is 3.53km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Sea View Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along some parts of this section. There are no cycle lanes.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 8 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 8 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(e) the characteristics of the road and roadsides; and	The following characteristics for Sea View Road were determined using a combination of site drive-over footage and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as “Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”.
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1296 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and within the same range as the traffic survey (990vpd).	Average daily traffic (ADT) was determined from MegaMaps as 605 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Sea View Road are as follows: <ul style="list-style-type: none"> <li>• 50km/h Between Ostend Road and Erua Road</li> <li>• 50km/h Between Erua Road and Onetangi Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Sea View Road are as follows: <ul style="list-style-type: none"> <li>• 39.98km/h Between Ostend Road and Erua Road</li> <li>• 37.43km/h Between Erua Road and Onetangi Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ostend Road:</b> 50 km/h (proposed 50 km/h)</li> <li>• <b>Erua Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>View Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Te Makiri Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Brown Road:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Seventh Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>Pah Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Hartley Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Onetangi Road:</b> 50 km/h (proposed 50 km/h)</li> </ul>
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**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	0
DSI crashes during the period	0	0
Corridor Length (m)	880	3530
Annual Daily Traffic (vpd)	1296	605

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
  -

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Winding	3.5
Carriageway width (road lane + shoulder)	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	2 to <3	1.25	2 to <3	1.25
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume (vpd)	1296	1.4	605	1

- Section 1: The Infrastructure Risk Rating Score is 2.20. For Urban areas this corresponds to an IRR band of **Medium**.
- Section 2: The Infrastructure Risk Rating Score is 2.43. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Ostend Road and Erua Road (Section 1),
- 40km/h Between Erua Road and Onetangi Road (Section 2),

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 40km/h on Between Ostend Road and Erua Road (Section 1),
- 40km/h on Between Erua Road and Onetangi Road (Section 2),

Sea View Road – Section 1, between Ostend Road and Erua Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 1 due to a multitude of factors. These being narrow and curved nature of the road, the high roadside hazards, its Access function and its existing mean operating speed (40km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 2 non-injury crashes.

Sea View Road – Section 2, between Erua Road and Onetangi Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 40km/h was selected, for Section 2 due to a multitude of factors. These being the narrow and winding nature of the road, the severe roadside hazards, its Secondary Collector function and its existing mean operating speed (37km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 8 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Sea View Road in Ostend/Onetangi, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Sea View Road – Sections 1 & 2, is 40km/h which is aligned with the recommended safe and appropriate speed.

**Speed Limit Review – Second Avenue (Onetangi)**

The speed limit on Second Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Second Avenue connects to The Stand to the north and Le Roy Road to the south. This road provides access to residential properties and the beach front. Second Avenue is approximately 0.11 km in length.</p> <p>Second Avenue is classified as an Access road under the one network road classification (ONRC). Second Avenue is a two-lane undivided road. There are no footpaths or cycle lane on this road. There is some perpendicular on street parking.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Second Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li>• <b>Roadside hazards (in both directions):</b> Minor</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Second Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Second Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>The Strand:</b> 50km/h (30km/h proposed)</li> <li><b>Le Roy Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	110
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Minor	0.67
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 1.94. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Second Avenue.*

Second Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Second Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Second Avenue due to a multitude of factors. These being the narrow and straight nature of the road, the minor roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Second Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Second Avenue, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Seventh Avenue (Onetangi)**

The speed limit on Seventh Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seventh Avenue connects to Sea View Road to the south and The Strand to the north. This road provides access to residential properties. Seventh Avenue is approximately 0.49 km in length.</p> <p>Seventh Avenue is classified as an Secondary Collector road under the one network road classification (ONRC). Seventh Avenue is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Seventh Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 301 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (301vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Seventh Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Seventh Avenue has a mean operating speed in the range of 23.28 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sea View Road:</b> 50km/h (40km/h proposed)</li> <li>• <b>The Strand:</b> 50km/h (30km/h proposed)</li> <li>• <b>Quelch Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (m)	490
Annual Daily Traffic (vpd)	301

The Collective Risk score is 0.40 and the Personal Risk score is 372. For Urban areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	301	1

The Infrastructure Risk Rating Score is 2.76. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Seventh Avenue.

Seventh Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Seventh Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Seventh Avenue due to a multitude of factors. These being the narrow and tortuous nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (23.28km/h). These features also contribute to the roads "Medium-High" IRR score and due to adverse crash history on the road, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Seventh Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Seventh Avenue, the actual operating speeds from the MegaMaps tool are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Shelly Beach Road (Surfdale)**

The speed limit on Shelly Beach Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Shelly Beach Road connects to Causeway Road to the north. This road provides access to residential properties and the beach front. Shelly Beach Road is approximately 0.56 km in length.</p> <p>Shelly Beach Road is classified as an Secondary Collector road under the one network road classification (ONRC). Shelly Beach Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. There is a parking area at the southern end near the beachfront.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Shelly Beach Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Minor</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 60 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Shelly Beach Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Shelly Beach Road has a mean operating speed in the range of 20.61 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Causeway Road:</b> 50km/h (50km/h proposed)</li> <li>• <b>Shelly Beach Road Extension:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	560
Annual Daily Traffic (vpd)	60

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Minor	0.67
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	60	1

The Infrastructure Risk Rating Score is 1.91. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Shelly Beach Road.*

Shelly Beach Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Shelly Beach Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Shelly Beach Road due to a multitude of factors. These being the narrow and curved nature of the road, the Minor roadside hazards, its Secondary Collector function and its existing mean operating speed (20.61km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Shelly Beach Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Shelly Beach Road, the actual operating speeds from the MegaMaps tool are 21km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Short Street (Surfdale)**

The speed limit on Short Street, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Short Street connects to Pacific Parade to the north and Beresford Avenue to the south. This road provides access to residential properties. Short Street is approximately 0.11 km in length.</p> <p>Short Street is classified as an Access road under the one network road classification (ONRC). Short Street is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Short Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Short Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Short Street has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Pacific Parade:</b> 50km/h (40km/h proposed)</li> <li>• <b>Beresford Avenue:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	110
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	260	1

The Infrastructure Risk Rating Score is 2.74. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Short Street.

Short Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Short Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Short Street due to a multitude of factors. These being the narrow and winding nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46km/h). These features also contribute to the roads "Medium-High" IRR score making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Short Street in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Short Street, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Sixth Avenue (Onetangi)**

The speed limit on Sixth Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sixth Avenue connects to The Strand to the north. This road provides access to residential properties. Sixth Avenue is approximately 0.07 km in length.</p> <p>Sixth Avenue is classified as an Access road under the one network road classification (ONRC). Sixth Avenue is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sixth Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 26 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Sixth Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Sixth Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>The Strand:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	70
Annual Daily Traffic (vpd)	26

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	26	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Sixth Avenue.*

Sixth Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Sixth Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Sixth Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Sixth Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Sixth Avenue, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Stonybatter Road Waiheke Island

The speed limit on Stonybatter Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stonybatter Road connects to Man O War Bay Road to the west. This road provides access to residential properties and vineyards. Stonybatter Road is approximately 1.11 km in length.</p> <p>Stonybatter Road is unclassified under the one network road classification (ONRC). Stonybatter Road is an unsealed road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stonybatter Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage and the MegaMaps tool. The IRR defines Remote rural as Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	No average daily traffic (ADT) was available for this road.

Requirement	Comments
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Stonybatter Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	Not available.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Man O War Bay Road: 80km/h (40km/h proposed)</li> </ul>

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1110
Annual Daily Traffic (vpd)	n/a

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

#### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote rural	1
Intersection density (per km)	<1	1
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	n/a	1

The Infrastructure Risk Rating Score is 2.0 . For Rural areas this corresponds to an IRR band of **Medium-High**.

#### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide <80km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Stonybattery Road.

Stonybattery Road is a Self-Explaining road as the mean operating speed is already likely to be below or near the proposed safe and appropriate speeds given the unsealed nature of the road, despite the existing 50 km/h speed limit. Engineering up of Stonybattery Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Stonybattery Road due to a multitude of factors. These being the narrow and winding nature of the road and the moderate roadside hazards. These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Stonybattery Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Stonybattery Road is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Surfdale Road (Surfdale)**

The speed limit on Surfdale Road, Surfdale, between Hamilton Road and Marama Avenue, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Surfdale Road connects to Hamilton Road to the south. This road provides access to residential properties and commercial activity. Surfdale Road, this section is approximately 0.07 km in length.</p> <p>Surfdale Road is classified as an Arterial road under the one network road classification (ONRC). Surfdale Road is a two-lane undivided road. There are footpaths and shared paths along this road. On-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 0 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Surfdale Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane and wide shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8016 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and the traffic survey.
(i) any planned modification to the road; and	There are currently no planned modifications.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Surfdale Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Surfdale Road has a mean operating speed in the range of 47km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Hamilton Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Marama Avenue:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	70
Annual Daily Traffic (vpd)	8016

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium lane, wide shoulder	1
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	8016	2.2

The Infrastructure Risk Rating Score is 2.36. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h Surfdale Road, between Hamilton Road and Marama Avenue*

A proposed speed limit of 30km/h was selected for Surfdale Road due to network consistency with adjoining residential streets and a tight bend.

Crash history from WK NZTA’s CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 0 non-injury crashes.

While the speed management guide suggests 50 km/h as the safe and appropriate speed for Surfdale Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Tahatai Road (Oneroa)**

The speed limit on Tahatai Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tahatai Road connects to Wattle Road to the north and The Esplanade to the south. This road provides access to residential properties. Tahatai Road is approximately 0.67 km in length.</p> <p>Tahatai Road is classified as an Secondary Collector road under the one network road classification (ONRC). Tahatai Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA’s Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tahatai Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>“Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tahatai Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tahatai Road has a mean operating speed in the range of 27.09 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wattle Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>The Esplanade:</b> 50km/h (30km/h proposed)</li> <li>• <b>Huruhi Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Nikau Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	670
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tahatai Road.

Tahatai Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tahatai Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Tahatai Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (27.09km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tahatai Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tahatai Road, the actual operating speeds from the MegaMaps tool are 27km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Tahī Road (Ostend)**

The speed limit on Tahī Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tahī Road connects to Erua Road to the north and Ostend Road to the south. This road provides access to commercial and industrial properties. Tahī Road is approximately 0.56 km in length.</p> <p>Tahī Road is classified as an Secondary Collector road under the one network road classification (ONRC). Tahī Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 7 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tahī Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial big box using the drive over footage and the MegaMaps tool. The IRR defines Commercial big box as "Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present".
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2321 vehicles per day (vpd), whilst available traffic survey data shows 1778vpd. This variation is consistent with the nature and land use of the road and fall within the same range.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tahi Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tahi Road has a mean operating speed in the range of 22.86 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Erua Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Poto Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Ostend Road:</b> 50km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	560
Annual Daily Traffic (vpd)	2321

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Commercial big box	4
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	2321	1.4

The Infrastructure Risk Rating Score is 2.25. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

## Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tahī Road.*

Tahī Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tahī Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Tahī Road due to a multitude of factors. These being the medium and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (22.86km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 7 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 7 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tahī Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tahī Road, the actual operating speeds from the MegaMaps tool are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Taraira Street (Ostend)

The speed limit on Taraira Street, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Taraira Street connects to Potai Street and Whakarite Road to the south. This road provides access to residential properties. Taraira Street is approximately 0.3 km in length.</p> <p>Taraira Street is classified as an Access road under the one network road classification (ONRC). Taraira Street is an unsealed road. There are no pedestrian and/or cyclist amenities along this road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Taraira Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (176vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Taraire Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Taraire Street has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Potai Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Whakarite Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	300
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	100	1

The Infrastructure Risk Rating Score is 2.43. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Taraire Street.

Taraire Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Taraire Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for Taraire Street due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 0 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 0 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Taraire Street in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Taraire Street, the actual operating speeds from the traffic surveys are 26 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Tawa Street Oneroa**

The speed limit on Tawa Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tawa Street connects to Kiwi Street to the west. This road provides access to residential properties. Tawa Street is approximately 0.52 km in length.</p> <p>Tawa Street is classified as an Secondary Collector road under the one network road classification (ONRC). Tawa Street is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tawa Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tawa Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tawa Street has a mean operating speed in the range of 20.9 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Kiwi Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Huia Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Makora Avenue:</b> 50km/h (30km/h proposed)</li> <li>• <b>Burrell Road Ext:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	520
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tawa Street.

Tawa Street is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tawa Street was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Tawa Street due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20.9km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tawa Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tawa Street, the actual operating speeds from the MegaMaps tool are 21km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Te Makiri Road (Onetangi)**

The speed limit on Te Makiri Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Makiri Road connects to Sea View Road to the north. This road provides access to residential properties. Te Makiri Road is approximately 0.31 km in length.</p> <p>Te Makiri Road is classified as an Access road under the one network road classification (ONRC). Te Makiri Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Makiri Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 362 vehicles per day (vpd), whilst available traffic survey data shows 119vpd. It is possible that the traffic volumes along this road may be subject to seasonal variation due to the access to holiday accommodation. To be conservative, the larger traffic volume has been adopted.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Te Makiri Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Makiri Road has a mean operating speed in the range of 22.69 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sea View Road:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	310
Annual Daily Traffic (vpd)	362

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	362	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Te Makiri Road.

Te Makiri Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Te Makiri Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Te Makiri Road due to a multitude of factors. These being the narrow and winding nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (22.69km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Te Makiri Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Te Makiri Road, the actual operating speeds from the Megamap are 23 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Te Toki Road (Ostend)

The speed limit on Te Toki Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Toki Road connects to Hill Road and Palm Road to the north and Wharf Road to the south. This road provides access to residential properties. Te Toki Road is approximately 0.97 km in length.</p> <p>Te Toki Road is classified as an Secondary Collector road under the one network road classification (ONRC). Te Toki Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Te Toki Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1436 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (1436vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Te Toki Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Toki Road has a mean operating speed in the range of 44.65 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Wilma Road:</b> 50km/h (30km/h proposed)</li> <li><b>Hill Road:</b> 50km/h (40km/h proposed)</li> <li><b>Bay Road:</b> 50km/h (30km/h proposed)</li> <li><b>Wharf Road:</b> 50km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	970
Annual Daily Traffic (vpd)	1436

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	1436	1.4

The Infrastructure Risk Rating Score is 2.59. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Te Toki Road.

Te Toki Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Te Toki Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Te Toki Road due to a multitude of factors. These being the narrow and curved nature of the road, the High roadside hazards, its Secondary Collector function and its existing mean operating speed (44.65km/h). These features also contribute to the roads "Medium-High" IRR score making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Te Toki Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Te Toki Road is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Te Whau Drive (Waiheke Island)**

The speed limit on Te Whau Drive, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Te Whau Drive connects to O'Brien Road to the north. This road provides access residential properties and local bays.</p> <p>Te Whau Drive is approximately 2.21 km in length. Te Whau Drive is classified as an Access road under the one network road classification (ONRC).</p> <p>Te Whau Drive is two-lane undivided road. There are no footpaths or cycle lanes along this road. There is no on-street parking.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadides; and	<p>The following characteristics for Te Whau Drive were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Te Whau Drive is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Te Whau Drive has a mean operating speed in the range of 38.75 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>O'Brien Road:</b> 80km/h (50km/h proposed)</li> <li>• <b>Rothschild Terrace:</b> 80km/h (50km/h proposed)</li> <li>• <b>Vintage Lane:</b> 80km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	2210
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Medium lane, Very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume	104	1

The Infrastructure Risk Rating Score is 1.49. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 50km/h for the full length of Te Whau Drive.

Te Whau Drive is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Te Whau Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50km/h was selected for Te Whau Drive due to a multitude of factors. These being the medium width and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (38.75 km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Te Whau Drive in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Te Whau Drive is 50 km/h which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction.

**Speed Limit Review – Tetley Road (Surfdale)**

The speed limit on Tetley Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tetley Road connects to Surfdale Road to the west and Hamilton Road to the east. This road provides access to residential properties. Tetley Road is approximately 0.44 km in length.</p> <p>Tetley Road is classified as an Access road under the one network road classification (ONRC). Tetley Road is a two-lane undivided road. There are no footpaths or cycle lanes along this road. There are no on-street parking provisions.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tetley Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tetley Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tetley Road has a mean operating speed in the range of 20.46 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Surfdale Road:</b> 50km/h (50km/h proposed)</li> <li>• <b>Park Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Marama Avenue:</b> 50km/h (30km/h proposed)</li> <li>• <b>Beresford Avenue:</b> 50km/h (30km/h proposed)</li> <li>• <b>Hamilton Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	440
Annual Daily Traffic (vpd)	260

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	260	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tetley Road.

Tetley Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tetley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Tetley Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20.46 km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tetley Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tetley Road, the actual operating speeds from the MegaMaps tool are 21km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – The Esplanade Palm Beach**

The speed limit on The Esplanade Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Esplanade connects to Moa Avenue to the west to Lannan Road to the east. This road provides access to the beachfront. The Esplanade is approximately 1.57 km in length.</p> <p>The Esplanade is classified as an Secondary Collector road under the one network road classification (ONRC). The Esplanade is Unsealed for the majority of the length. There are no pedestrian and/or cyclist amenities provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Esplanade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>Access density: 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on The Esplanade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of The Esplanade has a mean operating speed in the range of 20 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Lannan Road:</b> 50km/h (30km/h proposed)</li> <li><b>Moa Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Kiwi Street:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	860
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.57. For Urban areas this corresponds to an IRR band of Medium-High.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of The Esplanade .

The Esplanade is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of The Esplanade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for The Esplanade due to a multitude of factors. These being the narrow and curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes, making it a high-risk road<sup>1</sup>.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on The Esplanade in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for The Esplanade, the actual operating speeds from the Megamap are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – The Esplanade Palm Beach**

The speed limit on The Esplanade Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Esplanade connects to Hill Road to the north. This road provides access to the beach. The Esplanade is approximately 0.06 km in length.</p> <p>The Esplanade is classified as an Access road under the one network road classification (ONRC). The Esplanade is a two-lane, undivided road. There are no pedestrian and/or cyclist amenities along the road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 0 crashes between 2016 and 2020. Therefore, there are 0 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Esplanade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>Access density: &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on The Esplanade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of The Esplanade has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Hill Road: 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	60
Annual Daily Traffic (vpd)	52

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	52	1

The Infrastructure Risk Rating Score is 2.06. For Urban areas this corresponds to an IRR band of Low-Medium.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of The Esplanade .*

The Esplanade is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of The Esplanade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for The Esplanade due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Low-Medium " IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on The Esplanade in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for The Esplanade, the actual operating speeds from the Megamap are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – The Esplanade (Surfdale)

The speed limit on The Esplanade, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Esplanade connects to Blake Street to the north. This road provides access to the beach. The Esplanade is approximately 0.125 km in length.</p> <p>The Esplanade is classified as an Access road under the one network road classification (ONRC). The Esplanade is a two-lane, undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Esplanade were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on The Esplanade is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of The Esplanade has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Blake Street:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	125
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	<20	1.3
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 2.06. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of The Esplanade .*

The Esplanade is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of The Esplanade was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for The Esplanade due to a multitude of factors. These being the narrow lane width and straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20 km/h). These features also contribute to the roads "Low-Medium " IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on The Esplanade in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for The Esplanade, the actual operating speeds from the Megamap are 20 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – The Esplanade (Oneroa)**

The Esplanade, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: The Esplanade, between Tui Street and Tahatai Road
2. Section 2: The Esplanade, between Tui Street and 54m east of Hamilton Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of The Esplanade, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WKNZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	The Esplanade connects to Hill Road to the west and Tui Street to the east. This road provides access to residential properties and the beach.	The Esplanade connects to Tui Street to the west and ends 54m to the east of Hamilton Road to the east. This road provides access to residential properties and the beach.
	This section of The Esplanade is 0.14km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section of The Esplanade is 1.57km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no footpaths or cycle lanes along this section.	This section is an unsealed road for the majority of the length. There are no footpaths or cycle lanes along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	CAS records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for The Esplanade were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lanes and very narrow shoulders</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10</li> <li>• <b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd).	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

Requirement	Comments	
	Section 1	Section 2

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on The Esplanade are as follows: <ul style="list-style-type: none"> <li>• 50km/h Between Tui Street and Tahatai Road</li> <li>• 50km/h Between Tui Street and 54m east of Hamilton Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on The Esplanade are as follows: <ul style="list-style-type: none"> <li>• 20km/h Between Tui Street and Tahatai Road</li> <li>• 20km/h Between Tui Street and 54m east of Hamilton Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tui Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Tahatai Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Hamilton Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Moa Avenue:</b> 50km/h (30km/h proposed)</li> <li>• <b>Kiwi Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Lannan Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	140	1570
Annual Daily Traffic (vpd)	520	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score

Road stereotype	Two-lane undivided	3.7	Unsealed	10
Road alignment	Straight	1	Curved	1.8
Carriageway width (road lane + shoulder)	Narrow lanes and very narrow shoulders	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	>10	5	2 to <3	1.25
Access density (per km)	>20	1.3	10 to <20	1.1
Traffic volume (vpd)	520	1	520	1

- Section 1: The Infrastructure Risk Rating Score is 2.56. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.57. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Tui Street and Tahatai Road (Section 1),
- 40km/h Between Tui Street and 54m east of Hamilton Road (Section 2),

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Tui Street and Tahatai Road (Section 1),
- 30km/h on Between Tui Street and 54m east of Hamilton Road (Section 2),

The Esplanade – Section 1, between Tui Street and Tahatai Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Narrow and Straight nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Crash history from WK NZTA's CAS database shows zero crashes in the last 5 years.

A proposed speed limit of 30km/h was selected for The Esplanade – Section 2, due to a multitude of factors. These being the narrow and curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (37.8km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>3</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit on The Esplanade in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for The Esplanade – Sections 1 & 2 is 30km/h which is lower than the recommended safe and appropriate speed.

Engineering measures are proposed to be implemented for Section 2, with the intention of achieving an operating speed of less than 33km/h.

We have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – The Strand (Onetangi)

The speed limit on The Strand, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Strand connects to Fourth Avenue to the south. This road provides access to residential properties, small commercial properties, and the beachfront. The Strand is approximately 1.34 km in length.</p> <p>The Strand is classified as a Secondary Collector road under the one network road classification (ONRC). The Strand is a two-lane undivided road. There are footpaths and bus stops along this section. No cycle lanes or on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Strand were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on The Strand is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of The Strand has a mean operating speed in the range of 25.41 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Seventh Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Sixth Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Fourth Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Third Avenue:</b> 50km/h (30km/h proposed)</li> <li><b>Second Avenue:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	1340
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.04. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of The Strand.*

The Strand is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of The Strand was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for The Strand due to a multitude of factors. These being the narrow and straight nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (25.41km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on The Strand in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for The Strand, the actual operating speeds from the Megamap are 25 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Third Avenue (Onetangi)

The speed limit on Third Avenue, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Third Avenue connects to The Strand to the north and Waiheke Road to the south. This road provides access to residential properties and small commercial properties. Third Avenue is approximately 0.32 km in length.</p> <p>Third Avenue is classified as an Access road under the one network road classification (ONRC). Third Avenue is a two-lane undivided road. There are footpaths and bus stops along this road. No cycle lanes or on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Third Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Third Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Third Avenue has a mean operating speed in the range of 25.63 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>The Strand:</b> 50km/h (30km/h proposed)</li> <li><b>Waiheke Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	320
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, Narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	10 to <20	1.1
Traffic volume	104	1

The Infrastructure Risk Rating Score is 1.91. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Third Avenue.*

Third Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Third Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Third Avenue due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (25.63km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Third Avenue in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Third Avenue, the actual operating speeds from the MegaMaps tool are 26km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tiri Road (Oneroa)

Tiri Road, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

- Section 1: Tiri Road Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82)
- Section 2: Tiri Road Between Delamore Drive and Korora Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Tiri Road, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Tiri Road is a loop road that connects to Tiri Road to the north. This road provides access to residential properties.	This section of Tiri Road connects to Kokora Road to the south/east and Delamore Drive to the north. This road provides access to residential properties.
	This section of Tiri Road is 0.73km in length. It is classified as an Access road under the one network road classification (ONRC). Tiri Road is a two-lane undivided road.	This section of Tiri Road is 0.22km in length. It is classified as an Secondary Collector road under the one network road classification (ONRC). Tiri Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There is no footpath or cycle lane along this section.	This section is a two-way, two-lane, undivided road. There is no footpath or cycle lane along this section.
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	for all road users and therefore the crash risk for all road users was considered. CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Tiri Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane and very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3</li> <li><b>Access density:</b> &gt;20</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3</li> <li><b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 217 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 472 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Tiri Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82)</li> <li>50km/h Between Delamore Drive and Korora Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Tiri Road are as follows: <ul style="list-style-type: none"> <li>24.66km/h Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82)</li> <li>34.54km/h Between Delamore Drive and Korora Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Kokora Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Delamore Drive:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	730	220
Annual Daily Traffic (vpd)	217	472

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Winding	3.5	Straight	1
Carriageway width (road lane + shoulder)	Narrow lane and very narrow shoulder	2.01	Narrow lane and very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	2 to <3	1.25	2 to <3	1.25
Access density (per km)	>20	1.3	10 to <20	1.1
Traffic volume	217	1	472	1

- Section 1: The Infrastructure Risk Rating Score is 2.41. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 1.59. For Urban areas this corresponds to an IRR band of **Low**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 40km/h Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82) (Section 1),
- 40km/h Between Delamore Drive and Korora Road (Section 2).

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 30km/h on Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82) (Section 1),
- 30km/h on Between Delamore Drive and Korora Road (Section 2).

A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being the narrow and winding nature of the road, the high roadside hazards, its Access function and its existing mean operating speed (24.66km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Tiri Road – Section 2, between Delamore Drive and Korora Road, is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being the narrow and straight nature of the road, the moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (34.54km/h). These features also contribute to the roads "Low" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Tiri Road in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tiri Road – Sections 1 & 2, the actual operating speeds from the MegaMaps tool are 24.66km/h and 34.54km/h respectively.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Tiri View Road (Palm Beach)

The speed limit on Tiri View Road, Palm Beach, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tiri View Road connects to Palm Road to the north and Hill Road to the south. This road provides access to residential properties. Tiri View Road is approximately 0.62 km in length.</p> <p>Tiri View Road is classified as a Secondary Collector road under the one network road classification (ONRC). Tiri View Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tiri View Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tiri View Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tiri View Road has a mean operating speed in the range of 26.48 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Palm Road:</b> 50km/h (30km/h proposed)</li> <li><b>Hill Road:</b> 50km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	620
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tiri View Road.*

Tiri View Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Tiri View Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Tiri View Road due to a multitude of factors. These being the narrow and winding nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (26.48km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tiri View Road in Palm Beach, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tiri View Road, the actual operating speeds from the MegaMaps tool are 26km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Trig Hill Road (Onetangi)

The speed limit on Trig Hill Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Trig Hill Road connects to Onetangi Road to the north. This road provides access to residential properties. Trig Hill Road is approximately 1.84 km in length.</p> <p>Trig Hill Road is classified as an Access road under the one network road classification (ONRC). Trig Hill Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 2 serious, 0 minor and 3 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Trig Hill Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 245 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (122vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Trig Hill Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Trig Hill Road has a mean operating speed in the range of 37.63 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Marine View Road:</b> 50km/h (30km/h proposed)</li> <li><b>Waiaata Road:</b> 50km/h (30km/h proposed)</li> <li><b>Eden Terrace:</b> 50km/h (30km/h proposed)</li> <li><b>Woollams Road:</b> 50km/h (30km/h proposed)</li> <li><b>Onetangi Road:</b> 50km/h (50km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	2
Corridor Length (m)	1840
Annual Daily Traffic (vpd)	245

The Collective Risk score is 0.22 and the Personal Risk score is 243. For Urban areas this corresponds to a Collective Risk band of **High**, and a Personal Risk band of **High**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume (vpd)	245	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Trig Hill Road.*

A proposed speed limit of 30km/h was selected for Trig Hill Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (37.63km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as High and High respectively due to the number of DSI crashes. This along with the Medium High IRR score mak it a high-risk road<sup>1</sup>.

Crash history from WK NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 2 serious, 0 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Trig Hill Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Trig Hill Road, the operating speeds from the Megamap are 38km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Tui Street (Oneroa)

The speed limit on Tui Street, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tui Street connects to Ocean View Road to the north and The Esplanade to the south. This road provides access to residential properties. Tui Street is approximately 0.65 km in length.</p> <p>Tui Street is classified as an Secondary Collector road under the one network road classification (ONRC). Tui Street is a two-lane undivided road. There are footpaths along this road but no cycle lanes. Bus stops are present and on street parallel parking is allowed.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tui Street were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1206 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (1026vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Tui Street is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tui Street has a mean operating speed in the range of 28.62 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ocean View Road:</b> 50km/h (30km/h proposed)</li> <li><b>Matai Road:</b> 50km/h (30km/h proposed)</li> <li><b>Manuka Road:</b> 50km/h (30km/h proposed)</li> <li><b>Nikau Road:</b> 50km/h (30km/h proposed)</li> <li><b>Rata Street:</b> 50km/h (30km/h proposed)</li> <li><b>The Esplanade:</b> 50km/h (30km/h proposed)</li> <li><b>Mako Street:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	650
Annual Daily Traffic (vpd)	1206

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	1206	1.4

The Infrastructure Risk Rating Score is 2.13. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Tui Street.*

A proposed speed limit of 30km/h was selected for Tui Street due to a multitude of factors. These being the medium and straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (28.62km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Tui Street in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Tui Street, the actual operating speeds from the MegaMaps tool are 29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Upland Road (Ōmiha)

The speed limit on Upland Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Upland Road connects to Watson Road and Fairview Crescent to the north and Ōmiha Road to the south. This road provides access to residential properties. Upland Road is approximately 0.45 km in length.</p> <p>Upland Road is classified as an Access road under the one network road classification (ONRC). Upland Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Upland Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Upland Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Upland Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Ōmiha Road:</b> 50km/h (30km/h proposed)</li> <li><b>Watson Road:</b> 50km/h (30km/h proposed)</li> <li><b>Fairview Crescent:</b> 50km/h (30km/h proposed)</li> <li><b>Bella Vista Road:</b> 50km/h (30km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	450
Annual Daily Traffic (vpd)	208

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	208	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Upland Road.*

Upland Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Upland Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Upland Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Upland Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Upland Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Valley Road (Ōmiha)

The speed limit on Valley Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Valley Road connects to O'Brien Road to the northeast and McMillan Road to the south. This road provides access to residential properties. Valley Road is approximately 0.48 km in length.</p> <p>Valley Road is classified as an Access road under the one network road classification (ONRC). Valley Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Valley Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Valley Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Valley Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>O'Brien Road:</b> 50km/h (30km/h proposed)</li> <li><b>McMillan Road:</b> 50km/h (30km/h proposed)</li> <li><b>Wairua Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	479
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow, Very narrow	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	156	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Valley Road.*

Valley Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Valley Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Valley Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Valley Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Victoria Road North (Onetangi)

The speed limit on Victoria Road North, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Victoria Road North connects to Waiheke Road to the north and Victoria Road South &amp; Scotts Terrace to the south. This road provides access to residential properties. Victoria Road North is approximately 0.42 km in length.</p> <p>Victoria Road North is classified as an Access road under the one network road classification (ONRC). Victoria Road North is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Victoria Road North were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 100 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Victoria Road North is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Victoria Road North has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Waiheke road:</b> 50km/h (40km/h proposed)</li> <li><b>Scotts Terrace:</b> 50km/h (30km/h proposed)</li> <li><b>Victoria Road South:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	420
Annual Daily Traffic (vpd)	100

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (adt)	100	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Victoria Road North.*

Victoria Road North is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Victoria Road North was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Victoria Road North due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Victoria Road North in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Victoria Road North, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Victoria Road South (Onetangi)

The speed limit on Victoria Road South, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Victoria Road South connects Victoria Road North &amp; Scotts Terrace to the north and Eden Terrace to the south. This road provides access to residential properties. Victoria Road South is approximately 0.96 km in length.</p> <p>Victoria Road South is classified as an Secondary Collector road under the one network road classification (ONRC). Victoria Road South is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Victoria Road South were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is considered quite high for the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Victoria Road South is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Victoria Road South has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Eden Terrace:</b> 50km/h (30km/h proposed)</li> <li><b>Hobson Terrace:</b> 50km/h (30km/h proposed)</li> <li><b>Victoria Road North:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	960
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Winding	3.5
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.82. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Victoria Road South.*

Victoria Road South is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Victoria Road South was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Victoria Road South due to a multitude of factors. These being the Narrow and Winding nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Victoria Road South in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Victoria Road South, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – View Road (Ostend)

The speed limit on View Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>View Road connects to Crescent Road East &amp; Crescent Road West to the west and Sea View Road to the east. This road provides access to residential properties. View Road is approximately 0.77 km in length.</p> <p>View Road is classified as an Access road under the one network road classification (ONRC). View Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 3 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for View Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 156 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on View Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of View Road has a mean operating speed in the range of 34.81 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Sea View Road:</b> 50km/h (40km/h proposed)</li> <li><b>Crescent Road East:</b> 50km/h (30km/h proposed)</li> <li><b>Crescent Road West:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	2
DSI crashes during the period	0
Corridor Length (m)	770
Annual Daily Traffic (vpd)	156

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	156	1

The Infrastructure Risk Rating Score is 2.81. For Urban areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of View Road.*

A proposed speed limit of 30km/h was selected for View Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (34.81km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 0 serious, 2 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on View Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for View Road, the actual operating speeds from the MegaMaps tool are 35km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Vintage Lane (Waiheke Island)

The speed limit on Vintage Lane Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Vintage Lane connects to Te Whau Drive to the east. This road provides access to residential properties.</p> <p>Vintage Lane is approximately 0.87 km in length. Vintage Lane is classified as an Access road under the one network road classification (ONRC).</p> <p>Vintage Lane is a two-lane, two-way, undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Vintage Lane were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow and Very narrow</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Vintage Lane is 80km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Vintage Lane has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Whau Drive:</b> 80km/h (50km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	870
Annual Daily Traffic (vpd)	104

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	104	1

The Infrastructure Risk Rating Score is 1.51. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50km/h for the full length of Vintage Lane.*

Vintage Lane is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Vintage Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50km/h was selected for Vintage Lane due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crash in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crash.

After considering all the above factors, the existing speed limit(s) of 80 km/h on Vintage Lane in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Vintage Lane is 50 km/h which is lower than the speed limit recommended by the Speed Management Guide (80km/h); however, this is considered appropriate based on the function of the road and the mean operating speed supports the reduction. It will be consistent with the adjoining road.

## Speed Limit Review – Waiata Road (Onetangi)

The speed limit on Waiata Road, Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waiata Road connects to Trig Hill Road to the east and Onetangi Road to the west. This road provides access to residential properties. Waiata Road is approximately 0.3 km in length.</p> <p>Waiata Road is classified as an Secondary Collector road under the one network road classification (ONRC). Waiata Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waiata Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 580 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (415vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Waiata Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Waiata Road has a mean operating speed in the range of 46 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Trig Hill Road:</b> 50km/h (30km/h proposed)</li> <li><b>Onetangi Road:</b> 60km/h (60km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	300
Annual Daily Traffic (vpd)	580

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	580	1

The Infrastructure Risk Rating Score is 2.53. For Urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Waiata Road.*

A proposed speed limit of 30km/h was selected for Waiata Road due to a multitude of factors. These being the Narrow and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (46km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Waiata Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Waiata Road, the actual operating speeds from the MegaMaps tool are 46km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Waiheke Road (Onetangi/Waiheke Island)

Waiheke Road, Onetangi/Waiheke Island, is divided into the following section and outlined as follows<sup>1</sup>:

1. Section 1: Waiheke Road Between Onetangi Road and 70m south of Belle Terrace
2. Section 2: Waiheke Road Between the 70m south of Belle Terrace and Fisher Road
3. Section 3: Waiheke Road South of Fisher Road to Man O War Bay Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Waiheke Road, Onetangi/Waiheke Island have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Waiheke Road connects to Onetangi Road to the west and Orapiu Road to the east. This road provides access to rural residential properties and the wider road network.		
	This section of Waiheke Road is classified as an Secondary Collector road under the one network road classification (ONRC). Waiheke Road is Two-lane undivided. This section is 1.67km in length.	This section of Waiheke Road is classified as an Access road under the one network road classification (ONRC). Waiheke Road is Two-lane undivided. This section is 1.00km in length.	This section of Waiheke Road is classified as an Access road under the one network road classification (ONRC). Waiheke Road is Unsealed. This section is 1.82km in length.
	There are no pedestrian and/or cyclist amenities along this route.		
	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.		

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	CAS records 6 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 4 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.	CAS records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 3 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.	CAS records 4 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 2 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Waiheke Road were determined using a combination of site drive-over footage and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium and Narrow</li> </ul> <b>Roadside hazards (in both directions):</b> Severe	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium and Narrow</li> </ul> <b>Roadside hazards (in both directions):</b> High	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium and Narrow</li> </ul> <b>Roadside hazards (in both directions):</b> Severe
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.	The adjacent land use is classified as Rural residential using the drive over footage. The IRR defines Rural residential as Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> </ul> <b>Access density:</b> 10 to <20	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> </ul> <b>Access density:</b> 10 to <20	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> </ul> <b>Access density:</b> 10 to <20
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1399 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1196 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 999 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Waiheke Road are as follows: <ul style="list-style-type: none"> <li>50km/h Between Onetangi Road and 70m south of Belle Terrace</li> <li>50km/h Between the 70m south of Belle Terrace and Fisher Road</li> <li>80km/h South of Fisher Road to Man O War Bay Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Waiheke Road are as follows: <ul style="list-style-type: none"> <li>46.19km/h Between Onetangi Road and 70m south of Belle Terrace</li> <li>49.25km/h Between the 70m south of Belle Terrace and Fisher Road</li> <li>45.84km/h South of Fisher Road to Man O War Bay Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Third Avenue:</b> 50km (30km/h proposed)</li> <li><b>Victoria Road North:</b> 50km (30km/h proposed)</li> <li><b>Garrett Road:</b> 50km (30km/h proposed)</li> <li><b>Belle Terrace:</b> 50km (30km/h proposed)</li> <li><b>Fisher Road:</b> 80km (40km/h proposed)</li> <li><b>Man O War Bay Road:</b> 80km (40km/h proposed)</li> <li><b>Awaawaroa Road:</b> 80km (40km/h proposed)</li> <li><b>Orapiu Road:</b> 80km (60km/h proposed)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	0	1
DSI crashes during the period	1	0	1
Corridor Length (m)	1670	1000	1820
Annual Daily Traffic (vpd)	1399	1196	999

- Section 1
  - The Collective Risk score is 0.12. For Urban areas this corresponds to a Collective Risk band of Medium-High.
  - Personal Risk score is 23.45. A Personal Risk band of High.
- Section 2
  - The Collective Risk score is 0. For Rural areas this corresponds to a Collective Risk band of Low.
  - Personal Risk score is 0. A Personal Risk band of Low.
- Section 3
  - The Collective Risk score is 0.11. For Rural areas this corresponds to a Collective Risk band of Medium-High.
  - Personal Risk score is 30.14. A Personal Risk band of High.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2		Section 3	
	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Unsealed	10
Road alignment	Curved	1.8	Winding	3.5	Winding	3.5
Carriageway width (road lane + shoulder)	Medium, Narrow	1.45	Medium, Narrow	1.45	Medium, Narrow	1.45
Roadside hazards (in both directions)	Severe	2.8	High	2.28	Severe	2.8
Adjacent land use	Urban residential	3	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15	1 to <2	1.15
Access density (per km)	10 to <20	1.1	10 to <20	1.1	10 to <20	1.1
Traffic volume	1399	1.4	1196	1.4	999	1

- Section 1: The Infrastructure Risk Rating Score is 2.25. For Urban areas this corresponds to an IRR band of Medium.
- Section 2: The Infrastructure Risk Rating Score is 2.15. For Rural areas this corresponds to an IRR band of High.
- Section 3: The Infrastructure Risk Rating Score is 2.52. For Rural areas this corresponds to an IRR band of High.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 for section 1 and Table 2.2 for section 2&3of the Speed Management Guide is:

- 40km/h Between Onetangi Road and 70m south of Belle Terrace (Section 1),
- <80km/h Between the 70m south of Belle Terrace and Fisher Road (Section 2),
- <80km/h South of Fisher Road to Man O War Bay Road (Section 3)

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation is

- 40km/h on Between Onetangi Road and 70m south of Belle Terrace (Section 1),
- 60km/h on Between the 70m south of Belle Terrace and Fisher Road (Section 2),
- 60km/h on South of Fisher Road to Man O War Bay Road (Section 3).

A proposed speed limit of 40km/h was selected, for Section 1 due to a multitude of factors. These being medium and Curved nature of the road, the Severe roadside hazards, its Secondary Collector function. These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Medium-High and High respectively due to the number of DSI crashes, making it a high-risk road<sup>2</sup>.

Crash history from WK NZTA's CAS database shows 6 crashes in the last 5 years including 0 fatal, 1 serious, 1 minor and 4 non-injury crashes.

Waiheke Road Between the 70m south of Belle Terrace and Fisher Road , is a Self-Explaining road as the mean operating speed is already below or near the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 60km/h was selected, for Section 2 due to a multitude of factors. These being medium and winding nature of the road, the high roadside hazards, its Access function and its existing mean operating speed (49.25km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road. The collective and personal risk of this road are classified as 'Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 3 non-injury crashes.

Waiheke Road South of Fisher Road to Man O War Bay Road, is a Self-Explaining road as the mean operating speed is already below or near the proposed safe and appropriate speeds, despite the existing 80km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 60km/h was selected, for Section 3 due to a multitude of factors. These being medium and winding nature of the road, the severe roadside hazards, its Access function and its existing mean operating speed (45.84km/h). These features also contribute to the roads "High" IRR score and due to adverse crash history on the road. The collective and personal risk of this road are classified as Medium-High and High respectively due to the number of DSI crashes, making it a high-risk road.

Crash history from WK NZTA's CAS database shows 4 crashes in the last 5 years including 0 fatal, 1 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Waiheke Road in Onetangi/Waiheke Island, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Waiheke Road is 40km/h for section 1 and 60km/h for section 2&3 km/h which is aligned with the recommended safe and appropriate speed.

## **Speed Limit Review – Waikare Road (Oneroa)**

Waikare Road, Oneroa, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Waikare Road Between 120m northeast of Ocean View Road and Ocean View Road
2. Section 2: Waikare Road Between 120m northeast of Ocean View Road and Korora Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Waikare Road, Oneroa have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Waikare Road connects to Korora Road to the north and Ocean View Road to the south. This road provides access to residential properties and some commercial activity.	Waikare Road connects to Korora Road to the north and Ocean View Road to the south. This road provides access to residential properties.
	This section of Waikare Road is 0.12km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Waikare Road is a two-lane undivided road.	This section of Waikare Road is 0.23km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Waikare Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths in some sections. There are no cyclist amenities.	This section is a two-way, two-lane, undivided road. There are footpaths in some sections. There are no cyclist amenities.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.	CAS records 1 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Waikare Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Moderate	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane, very narrow shoulder</li> </ul> <b>Roadside hazards (in both directions):</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .	
	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <b>Access density:</b> >20	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> </ul> <b>Access density:</b> >20
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	
	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2080 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Waikare Road are as follows: <ul style="list-style-type: none"> <li>• 50km/h Between 120m northeast of Ocean View Road and Ocean View Road</li> <li>• 50km/h Between 120m northeast of Ocean View Road and Korora Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Waikare Road are as follows: <ul style="list-style-type: none"> <li>• 26.15km/h Between 120m northeast of Ocean View Road and Ocean View Road</li> <li>• 26.15km/h Between 120m northeast of Ocean View Road and Korora Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Korora Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Ocean View Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (m)	120	230
Annual Daily Traffic (vpd)	2080	2080

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1	Straight	1
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	5 to <10	2.6
Access density (per km)	>20	1.3	>20	1.3
Traffic volume (vpd)	2080	1	2080	1

- Section 1: The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.
- Section 2: The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- 40km/h between 120m northeast of Ocean View Road and Ocean View Road (Section 1),
- 40km/h between 120m northeast of Ocean View Road and Korora Road (Section 2)

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 30km/h on Between 120m northeast of Ocean View Road and Ocean View Road (Section 1),
- 30km/h on Between 120m northeast of Ocean View Road and Korora Road (Section 2).

Waikare Road – Section 1, between 120m northeast of Ocean View Road and Ocean View Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 1 due to a multitude of factors. These being Medium and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (26.15km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

Waikare Road – Section 2, between 120m northeast of Ocean View Road and Korora Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being Medium and Straight nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (26.15km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Waikare Road in Oneroa, are not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Waikare Road – Sections 1 & 2, the actual operating speeds from the MegaMaps tool are 26.15km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Waimangu Road (Waiheke Island)

The speed limit on Waimangu Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waimangu Road connects to Gordons Road to the south. This road provides access to residential properties.</p> <p>Waimangu Road is approximately 0.59 km in length. Waimangu Road is classified as an Access road under the one network road classification (ONRC).</p> <p>Waimangu Road is a two-way, unsealed road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waimangu Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane and Very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using the drive over footage and the MegaMaps tool. The IRR defines Remote rural as "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 58 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey volumes (27vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Waimangu Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waimangu Road has a mean operating speed in the range of 21 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Gordons Road:</b> 80km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	590
Annual Daily Traffic (vpd)	58

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote rural	1
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.1
Traffic volume (vpd)	58	1

The Infrastructure Risk Rating Score is 1.97. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Waimangu Road.*

Waimangu Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Waimangu Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Waimangu Road due to a multitude of factors. These being the narrow and curved nature of the road, the high roadside hazards, its Access function and its existing mean operating speed (21km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Waimangu Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Waimangu Road is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

### Speed Limit Review – Wairua Road (Ōmiha)

The speed limit on Wairua Road Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wairua Road connects to Valley Road to the north and McMillan Road to the south. This road provides access to residential properties. Wairua Road is approximately 0.28 km in length.</p> <p>Wairua Road is classified as an Access road under the one network road classification (ONRC). Wairua Road is an unsealed road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wairua Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 40 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (36vpd)
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Wairua Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wairua Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Valley Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>McMillan Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	282
Annual Daily Traffic (vpd)	40

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	40	1

The Infrastructure Risk Rating Score is 3.16. For Urban areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Wairua Road.

Wairua Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Wairua Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Wairua Road due to a multitude of factors. These being the narrow and curved nature of the road, the High roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Wairua Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wairua Road, the actual operating speeds from the MegaMaps tool are 20km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Waitai Road (Ostend)**

The speed limit on Waitai Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waitai Road connects to Wharf Road to the west and Whakarite Road to the east. This road provides access to residential properties. Waitai Road is approximately 0.27 km in length.</p> <p>Waitai Road is classified as a Secondary Collector road under the one network road classification (ONRC). Waitai Road is a two-lane undivided road. There are footpaths along this road. No cycle lanes are provided. On-street parking is permitted with recessed parking bays provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Waitai Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Waitai Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Waitai Road has a mean operating speed in the range of 29.46 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wharf Road:</b> 50km/h (50km/h proposed)</li> <li>• <b>Whakarite Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	270
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Waitai Road.*

Waitai Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Waitai Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Waitai Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (29.46km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Waitai Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Waitai Road, the actual operating speeds from the MegaMaps tool are 29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Wallingford Avenue (Waiheke Island)**

The speed limit on Wallingford Avenue, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wallingford Avenue connects to Anzac Road to the north. This road provides access residential properties.</p> <p>Wallingford Avenue is approximately 0.15 km in length. Wallingford Avenue is classified as an Access road under the one network road classification (ONRC).</p> <p>Wallingford Avenue is a two-way, unsealed road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wallingford Avenue were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Wallingford Avenue is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wallingford Avenue has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Anzac Road:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	150
Annual Daily Traffic (vpd)	50

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	50	1

The Infrastructure Risk Rating Score is 2.37. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide <80km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Wallingford Avenue.*

Wallingford Avenue is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Wallingford Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Wallingford Avenue due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Wallingford Avenue in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Wallingford Avenue is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

### Speed Limit Review – Walter Frank Drive (Waiheke Island)

The speed limit on Walter Frank Drive, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

#### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Walter Frank Drive connects to Park Point Drive to the south and Church Bay Road to the north. This road provides access to residential properties and vineyards.  Walter Frank Drive is approximately 0.45 km in length. Walter Frank Drive is classified as an Access road under the one network road classification (ONRC).  Walter Frank Drive is two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.  This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for Walter Frank Drive were determined using a combination of site drive-over footage and geomaps information. <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two-lane undivided</li><li>• <b>Road alignment:</b> Curved</li><li>• <b>Carriageway width:</b> Narrow lane, very narrow shoulder</li><li>• <b>Roadside hazards (in both directions):</b> Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 683 vehicles per day (vpd). This level of traffic volume appears inconsistent with the nature of this road and may be as a result of the vineyards along this road. No survey data is available.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Walter Frank Drive is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Walter Frank Drive has a mean operating speed in the range of 35.01 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Church Bay Road:</b> 50km/h (40km/h proposed)</li> <li>• <b>Park Point Drive:</b> 50km/h (40km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	450
Annual Daily Traffic (vpd)	683

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	3 to <5	1.5
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	683	1

The Infrastructure Risk Rating Score is 1.61. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Walter Frank Drive.

Walter Frank Drive is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Walter Frank Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Walter Frank Drive due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (35.01km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Walter Frank Drive in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Walter Frank Drive is 40km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Watson Road (Ōmiha)**

The speed limit on Watson Road, Ōmiha, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Watson Road connects to Glen Brook Road to the north and Upland Road to the south. This road provides access to residential properties. Watson Road is approximately 0.18 km in length.</p> <p>Watson Road is classified as an Secondary Collector road under the one network road classification (ONRC). Watson Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Watson Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> </ul>

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Watson Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Watson Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Glen Brook Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Upland Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	178
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume (vpd)	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

## Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Watson Road.

Watson Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Watson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30 km/h was selected for Watson Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (20 km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Watson Road in Ōmiha, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Watson Road, the actual operating speeds from the MegaMaps tool are 20 km/h.

Therefore, we have determined 30 km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Wattle Road (Oneroa)

The speed limit on Wattle Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wattle Road connects to Mako Street to the north and Tahatai Road to the south. This road provides access to residential properties. Wattle Road is approximately 0.16 km in length.</p> <p>Wattle Road is classified as an Secondary Collector road under the one network road classification (ONRC). Wattle Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wattle Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Wattle Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wattle Road has a mean operating speed in the range of 22.5 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mako Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Ridge Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Tahatai Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	160
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Wattle Road.

Wattle Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Wattle Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Wattle Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (22.5km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Wattle Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wattle Road, the actual operating speeds from the MegaMaps tool are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Weka Road (Oneroa)**

The speed limit on Weka Road, Oneroa, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Weka Road connects to Ocean View Road to the north and Mako Street to the south. This road provides access to residential properties. Weka Road is approximately 0.34 km in length.</p> <p>Weka Road is classified as an Secondary Collector road under the one network road classification (ONRC). Weka Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Weka Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Weka Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Weka Road has a mean operating speed in the range of 23.18 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ocean View Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Kuaka Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Mako Street:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	340
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	>10	5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.52. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Weka Road.

Weka Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Weka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Weka Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (23.18km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Weka Road in Oneroa, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Weka Road, the actual operating speeds from the MegaMaps tool are 23km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Wellington Road (Surfdale)**

The speed limit on Wellington Road, Surfdale, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wellington Road connects to Ocean Road to the north and Nelson Avenue to the south. This road provides access to residential properties. Wellington Road is approximately 0.45 km in length.</p> <p>Wellington Road is classified as an Secondary Collector road under the one network road classification (ONRC). Wellington Road is a Two-lane undivided road. Pedestrian amenities including footpaths and a pedestrian refuge island are provided. Bus stops are also provided. However, there are no cyclist amenities. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 1 crash between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 1 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wellington Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 520 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Wellington Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wellington Road has a mean operating speed in the range of 22 km/h.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ocean Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Nelson Avenue:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	450
Annual Daily Traffic (vpd)	520

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	3 to <5	1.5
Access density (per km)	>20	1.3
Traffic volume	520	1

The Infrastructure Risk Rating Score is 2.00. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Wellington Road.*

Wellington Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Wellington Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Wellington Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (22km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

Crash history from WK NZTA's CAS database shows 1 crashes in the last 5 years including 0 fatal, 0 serious, 0 minor and 1 non-injury crash.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Wellington Road in Surfdale, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wellington Road, the actual operating speeds from the MegaMaps tool are 22km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Whakarite Road (Ostend)**

The speed limit on Whakarite Road, Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Whakarite Road connects to Taraire Street to the north and Ostend Road to the south. This road provides access to residential properties. Whakarite Road is approximately 0.74 km in length.</p> <p>Whakarite Road is classified as an Secondary Collector road under the one network road classification (ONRC). Whakarite Road is a two-lane undivided road. Footpaths are provided along this road. No cyclist amenities are provided. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Whakarite Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	A combination of site drive over footage and geomaps information revealed: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1241 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (1070vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Whakarite Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Whakarite Road has a mean operating speed in the range of 34.94 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Tarairé Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Waitai Road:</b> 50km/h (30km/h proposed)</li> <li>• <b>Ostend Road:</b> 50km/h (50km/h proposed)</li> <li>• <b>Homai Street:</b> 50km/h (30km/h proposed)</li> <li>• <b>Potai Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (m)	740
Annual Daily Traffic (vpd)	1241

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume (vpd)	1241	1

The Infrastructure Risk Rating Score is 2.24. For Urban areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Whakarite Road.*

A proposed speed limit of 30km/h was selected for Whakarite Road due to a multitude of factors. These being the narrow and curved nature of the road, the Moderate roadside hazards, its Secondary Collector function and its existing mean operating speed (34.94km/h). These features also contribute to the roads "Medium" IRR score. The collective and personal risk of this road are classified as Low-Low and Low respectively.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Whakarite Road in Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Whakarite Road, the actual operating speeds from the MegaMaps tool are 35km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Wharf Road (Ostend)**

Wharf Road, Ostend, is divided into the following sections and outlined as follows<sup>1</sup>:

1. Section 1: Wharf Road Between Causeway Road and Homai Street
2. Section 2: Wharf Road Between Causeway Road and the southern end of Wharf Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

All sections of Wharf Road, Ostend have been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section of Wharf Road connects to Causeway Road to the south and Homai Street / Crescent Road East to the north. This road provides access to residential properties and some commercial activities.	This section of Wharf Road connects to Causeway Road to the north and continues to the southern end of Wharf Road. This road provides access to residential properties and the boat docks/carpark area.
	This section of Wharf Road is 0.96km in length. It is classified as an Arterial road under the one network road classification (ONRC). Wharf Road is a two-lane undivided road.	This section of Wharf Road is 0.95km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC). Wharf Road is a two-lane undivided road.
	This section is a two-way, two-lane, undivided road. There are footpaths and a bus stop along this section. There are no cycle lanes.	This section is a two-way, two-lane, undivided road. There are footpaths along this section. There are no cycle lanes.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) was used to determine the crash history between 2016 and 2020. CAS includes crashes for all road users and therefore the crash risk for all road users was considered.	
	CAS records 0 crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.	CAS records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Wharf Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane and very narrow shoulder</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	
	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".	The adjacent land use is classified as Urban residential using the drive over footage. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2</li> <li>• <b>Access density:</b> 10 to &lt;20</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8369 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and within range of the traffic survey (5250vpd).	Average daily traffic (ADT) was determined from MegaMaps as 8369 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit(s) on Wharf Road are as follows: <ul style="list-style-type: none"> <li>• 50km/h Between Causeway Road and Homai Street</li> <li>• 50km/h Between Causeway Road and the southern end of Wharf Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	The mean operating speed limit(s) on Wharf Road are as follows: <ul style="list-style-type: none"> <li>• 43.25km/h Between Causeway Road and Homai Street</li> <li>• 28.36km/h Between Causeway Road and the southern end of Wharf Road</li> </ul>
Existing Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ostend Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Causeway Road:</b> 50 km/h</li> <li>• <b>Putiki Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Belgium Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Waitai Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Muritai Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Crescent Road East:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Te Toki Road:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Homai Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	0
Corridor Length (m)	960	950
Annual Daily Traffic (vpd)	8369	8369

- Section 1
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**.
  - Personal Risk score is 0. A Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Curved	1.8	Curved	1.8
Carriageway width (road lane + shoulder)	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	Severe	2.8
Adjacent land use	Urban residential	3	Urban residential	3
Intersection density (per km)	5 to <10	2.6	1 to <2	1.15
Access density (per km)	10 to <20	1.1	10 to <20	1.1
Traffic volume	8369	2.2	8369	2.2

- Section 1: The Infrastructure Risk Rating Score is 2.51. For Urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2: The Infrastructure Risk Rating Score is 2.45. For Urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is:

- 50km/h Between Causeway Road and Homai Street (Section 1),
- 50km/h Between Causeway Road and the southern end of Wharf Road (Section 2)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50km/h on Between Causeway Road and Homai Street (Section 1),
- 30km/h on Between Causeway Road and the southern end of Wharf Road (Section 2).

Wharf Road – Section 1 between Causeway Road and Homai Street, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 50km/h was selected, for Section 1 due to a multitude of factors. These being the medium and curved nature of the road, the moderate roadside hazards, its Arterial function and its existing mean operating speed (43km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>2</sup>. The collective and personal risk of this road are classified as Low and Low respectively due to the number of DSI crashes.

Wharf Road – Section 2, between Causeway Road and the southern end of Wharf Road, is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50km/h speed limit. Engineering up of this section was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. A proposed speed limit of 30km/h was selected, for Section 2 due to a multitude of factors. These being the medium and curved nature of the road, the Severe roadside hazards, its Secondary Collector function and its existing mean operating speed (28km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>3</sup>. The collective and personal risk of this road are classified as Low and Low due to the number of DSI crashes.

Crash history from WK NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit(s) on Wharf Road in Ostend, are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Wharf Road – Section 1, is 50km/h which is aligned with the recommended safe and appropriate speed.

While the speed management guide suggests 50km/h as the safe and appropriate speed for Wharf Road – Section 2, the actual operating speeds from the MegaMaps tool are 28km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road, and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>3</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## roadSpeed Limit Review – Wilma Road (Surfdale/Ostend)

The speed limit on Wilma Road Surfdale/Ostend, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wilma Road connects to Te Toki Road to the north and Causeway Road to the south. This road provides access to residential properties. Wilma Road is approximately 2.39 km in length.</p> <p>Wilma Road is classified as an Access road under the one network road classification (ONRC). Wilma Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wilma Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as "Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 289 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and the traffic survey (289vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Wilma Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Wilma Road has a mean operating speed in the range of 32.09 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Toki Road:</b> 50km/h (40km/h proposed)</li> <li><b>Causeway Road:</b> 50km/h (50km/h proposed)</li> <li><b>Hillside Road:</b> 50km/h (50km/h proposed)</li> <li><b>Dickson Road:</b> 50km/h (30km/h proposed)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	1
Corridor Length (m)	2390
Annual Daily Traffic (vpd)	289

The Collective Risk score is 0.08 and the Personal Risk score is 79.33. For Urban areas this corresponds to a Collective Risk band of **Medium**, and a Personal Risk band of **High**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Tortuous	6
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.8
Adjacent land use	Urban residential	3
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.3
Traffic volume	289	1

The Infrastructure Risk Rating Score is 2.73. For Urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Wilma Road.*

Wilma Road is a Self-Explaining road as the mean operating speed is already near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Wilma Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 30km/h was selected for Wilma Road due to a multitude of factors. These being the narrow and tortuous nature of the road, the Severe roadside hazards, its Access function and its existing mean operating speed (32.09km/h). These features also contribute to the roads "Medium-High" IRR score. The collective and personal risk of this road are classified as Medium and High respectively due to the number of DSI crashes, making it a high-risk road<sup>1</sup>.

Crash history from WK NZTA's CAS database shows 2 crashes in the last 5 years including 0 fatal, 1 serious, 0 minor and 1 non-injury crash.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Wilma Road in Surfdale/Ostend, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Wilma Road, the actual operating speeds from the MegaMaps tool are 32km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Woodside Bay Road (Waiheke Island)

The speed limit on Woodside Bay Road, Waiheke Island, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woodside Bay Road connects Gordons Road to the north. This road provides access to residential properties.</p> <p>Woodside Bay Road is approximately 0.47 km in length. Woodside Bay Road is classified as an Access road under the one network road classification (ONRC).</p> <p>Woodside Bay Road is a two-way, unsealed road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woodside Bay Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane, very narrow shoulder</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using the drive over footage and the MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements".

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 32 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey (28vpd).
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Woodside Bay Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Woodside Bay Road has a mean operating speed in the range of 20 km/h.
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Gordons Road:</b> 60km/h (40km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	470
Annual Daily Traffic (vpd)	32

The Collective Risk score is 0 and the Personal Risk score is 0. For Rural areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Unsealed	10
Road alignment	Curved	1.8
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.25
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	32	1

The Infrastructure Risk Rating Score is 1.96. For Rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40km/h for the full length of Woodside Bay Road.*

Woodside Bay Road is a Self-Explaining road as the mean operating speed is already below the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Woodside Bay Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40km/h was selected for Woodside Bay Road due to a multitude of factors. These being the narrow and curved nature of the road, the moderate roadside hazards, its Access function and its existing mean operating speed (20km/h). These features also contribute to the roads "Medium-High" IRR score, making it a high-risk road<sup>1</sup>. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Woodside Bay Road in Waiheke Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit(s) for Woodside Bay Road is 40km/h which is aligned with the recommended safe and appropriate speed.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Woollams Road (Onetangi)

The speed limit on Woollams Road Onetangi, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Woollams Road connects to Trig Hill Road to the east. This road provides access to residential properties. Woollams Road is approximately 0.16 km in length.</p> <p>Woollams Road is classified as an Access road under the one network road classification (ONRC). Woollams Road is a two-lane undivided road. There are no footpaths or cycle lanes on this road. No on-street parking is provided.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.</p> <p>This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Woollams Road were determined using a combination of site drive-over footage and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lanes and Very narrow shoulders</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban residential using the drive over footage and the MegaMaps tool. The IRR defines Urban residential as <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>A combination of site drive over footage and geomaps information revealed:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> &gt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 245 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Waiheke Local Board via meetings on 11th August 2021. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit on Woollams Road is 50km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Woollams Road has a mean operating speed in the range of 37.63 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Existing Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Trig Hill Road:</b> 50km/h (30km/h proposed)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (m)	160
Annual Daily Traffic (vpd)	245

The Collective Risk score is 0 and the Personal Risk score is 0. For Urban areas this corresponds to a Collective Risk band of **Low**, and a Personal Risk band of **Low**.

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Urban residential	3
Intersection density (per km)	5 to <10	2.6
Access density (per km)	>20	1.3
Traffic volume	245	1

The Infrastructure Risk Rating Score is 1.98. For Urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30km/h for the full length of Woollams Road.*

A proposed speed limit of 30km/h was selected for Woollams Road due to a multitude of factors. These being the narrow and straight nature of the road, the Moderate roadside hazards, its Access function and its existing mean operating speed (37.63km/h). These features also contribute to the roads "Low-Medium" IRR score. The collective and personal risk of this road are classified as Low and Low respectively.

After considering all the above factors, the existing speed limit(s) of 50 km/h on Woollams Road in Onetangi, is not considered to be a safe and appropriate speed limit for this road.

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Woollams Road, the actual operating speeds from the MegaMaps tool are 38km/h.

Engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Aio Wira Road (Waitakere)

The speed limit on Aio Wira Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Aio Wira Road connects to Te Henga Road to the east and is a no-exit road at the western end. This road provides access to rural residential properties.</p> <p>This section is approximately 1.1 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Aio Wira Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 39 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 41 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Henga Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.10
Annual Daily Traffic	39

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.34. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Aio Wira Road.*

Aio Wira Road is a self-explaining road as the mean operating speeds (41 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Aio Wira Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Aio Wira Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 41 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Aio Wira Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate

speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Anawhata Road (Piha)

The speed limit on Piha Road, Anawhata has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Anawhata Road connects to Piha Road to the south-east and is a no-exit road at the north-western end. This road provides access to the Waitakere Ranges Regional Park and Anawhata Beach.</p> <p>This section is approximately 9.89 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 1 serious, 2 minor and 2 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Anawhata Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 208 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 32 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Piha Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	9.89
Annual Daily Traffic	208

- The Collective Risk score is 0.02. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 26.64. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote Rural	1.00
Intersection density (per km)	<1	1.00
Access density (per km)	<1	1.00
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.39. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Anawhata Road.*

Anawhata Road is a self-explaining road as the mean operating speeds (32 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Anawhata Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Anawhata Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 32 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 5 crashes in the last 5 years including 1 serious, 2 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 100 km/h on Anawhata Road in Piha is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Anzac Valley Road (Waitakere)

Anzac Valley Road, Waitakere, is divided into two sections as follows:<sup>1</sup>

- Section 1: Anzac Valley Road between Bethells Road and 170m south of Bethells Road
- Section 2: Anzac Valley Road between 170m south of Bethells Road and the southern end of Anzac Valley Road

These sections were chosen as Section 1 covers an entrance to Waitakere School with an associated pick-up and drop-off area. Given the presence of the school access, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Anzac Valley Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Anzac Valley Road connects to Bethells Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.	
	This section is approximately 0.17 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.85 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities. There is a pick-up and drop off area that provide car parks for Waitakere School on this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Anzac Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 539 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 539 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is: <ul style="list-style-type: none"> <li>50 km/h between Bethells Road and 20m south of Bethells Road.</li> <li>70 km/h between 20m south of Bethells Road and 170m south of Bethells Road.</li> </ul>	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 56 km/h.	This section has a mean operating speed of 56 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bethells Road:</b> 50 km/h</li> <li><b>Wendy Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Streed Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.17	1.85
Annual Daily Traffic	539	539

- Section 1

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.70. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.70. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for both sections.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 50 km/h on Anzac Valley Road between Bethells Road and 170m south of Bethells Road
- 60 km/h on Anzac Valley Road between 170m south of Bethells Road and the southern end of the road.

Anzac Valley Road is a self-explaining road as the mean operating speeds (56 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. It is also noted that the operating speed is measured for the length of the road but is likely to be below 50 km/h outside the school entrance where the 50 km/h speed limit is proposed. Engineering up of Anzac Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Anzac Valley Road between Bethells Road and 170m south of Bethells Road due to the school access and hence the likely presence of high numbers of children and turning vehicles on the road. A proposed speed limit of 60 km/h was selected for the remainder of Anzac Valley Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 56 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Anzac Valley Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limits of 50 km/h and 60 km/h for the sections outlined above are aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Arrowsmith Road (Waitakere)

The speed limit on Arrowsmith Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Arrowsmith Road connects to Wairere Road to the south and is a no-exit road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 1.05 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Arrowsmith Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 152 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.05
Annual Daily Traffic	152

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.61. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Arrowsmith Road.*

Arrowsmith Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Arrowsmith Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Arrowsmith Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road. <sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Arrowsmith Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Atarua Gardens (Oratia)**

The speed limit on Atarua Gardens, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Atarua Gardens connects to Bush Road to the west and is a no-exit road at the eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.37 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There is a footpath on the road but there are no cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Atarua Gardens were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 388 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 29 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bush Road:</b> 70 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.37
Annual Daily Traffic	388

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.82. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Atarua Gardens.*

Atarua Gardens is a self-explaining road as the mean operating speeds (29 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Atarua Gardens was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Atarua Gardens due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 29 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Atarua Gardens in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Bendalls Lane (Oratia)**

The speed limit on Bendalls Lane, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bendalls Lane connects to West Coast Road to the south and is a no-exit road at the northern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.37 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There is a footpath on the road but no cycle amenities, and no on-street parking is provided along the road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Bendalls Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> &gt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 394 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.37
Annual Daily Traffic	394

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.82. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Bendalls Lane.*

Bendalls Lane is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Bendalls Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Bendalls Lane due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Bendalls Lane in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Bethells Road (Waitakere)**

Bethells Road, Waitakere, is divided into four sections as follows: <sup>1</sup>

- Section 1: Bethells Road between Waitakere Road and 75m west of Waitakere Road
- Section 2: Bethells Road between 75m west of Waitakere Road and 85m east of Wairere Road
- Section 3: Bethells Road between 85m east of Wairere Road 360m east of Tasman View Road
- Section 4: Bethells Road between 360m east of Tasman View Road and the western end of the road.

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Bethells Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Section 1 and Section 2*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Bethells Road connects to Waitakere Road to the east and is a no-exit road at Bethells Beach at the western end. This road provides access to rural residential properties.	
	This section is approximately 0.08 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.47 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on the road, but no cycle amenities. There is no on-street parking provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on the road, but no cycle amenities. There is no on-street parking provided available on this section of road.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	A section of Bethells Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Bethells Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,785 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 2,785 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

Table 2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Section 3 and Section 4

Requirement	Comments	
	Section 3	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Bethells Road connects to Waitakere Road to the east and is a no-exit road at Bethells Beach at the western end. This road provides access to rural residential properties.	
	This section is approximately 9.64 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 2.06 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 18 crashes between 2016 and 2020: 0 fatal, 1 serious, 9 minor and 8 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	A section of Bethells Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Bethells Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,309 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,367 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1 and 2, further relevant information was sought as summarised in Table 3 and 4 below.

Table 3: Additional Relevant Factors – Section 1 and 2

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 50 km/h. There is a 40 km/h variable school speed limit between 40m west of Anzac Valley Road and 360m west of Anzac Valley Road.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 48 km/h.	This section has a mean operating speed of 48 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waitakere Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Anzac Valley Road:</b> 70 km/h (proposed 50 km/h)</li> </ul>	

Table 4: Additional Relevant Factors – Section 3 and 4

AT also had regard to	Section 3	Section 4
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 56 km/h.	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Duffy Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Steam Hauler Track:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Stoney Creek Drive:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Te Henga Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Long Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Te Auta Ridge Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.08	0.47
Annual Daily Traffic	2,785	2,785

Required Information for safety metrics calculations	Data	
	Section 3	Section 4
Crash Analysis Period (years)	5	5
Total injury crashes during period	10	0
DSI crashes during the period	1	0
Corridor Length (km)	9.64	2.06
Annual Daily Traffic	1,309	1,367

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.02. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 4.34. For rural areas this corresponds to a Personal Risk band of **Low-Medium**
- Section 4
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Straight	1.00	Straight	1.00
Carriageway width	Medium lane, narrow shoulder	1.45	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	5 to <10	2.60	<1	1.00
Access density (per km)	5 to <10	1.06	20+	1.30
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Town	2.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.74. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.41. For rural areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.06. For rural areas this corresponds to an IRR band of **High**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.31. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- Less than 80 km/h for Bethells Road between Waitakere Road 75m west of Waitakere Road (Section 1)
- 80 km/h for Bethells Road between 75m west of Waitakere Road and 85m east of Wairere Road (Section 2)
- Less than 80 km/h between 85m east of Wairere Road and 360m east of Tasman View Road (Section 3)
- 50 km/h for Bethells Road between 360m east of Tasman View Road and the western end of the road (Section 4).

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- *60 km/h on Bethells Road between Waitakere Road and 75m west of Waitakere Road (Section 1)*
- *50 km/h on Bethells Road between 75m west of Waitakere Road and 85m east of Wairere Road (Section 2) with a 40 km/h school speed zone between 40m west of Anzac Valley Road and 360m west of Anzac Valley Road.*
- *60 km/h on Bethells Road between 85m east of Wairere Road and 360m east of Tasman View Road (Section 3)*
- *50 km/h on Bethells Road between 360m east of Tasman View Road and the western end of the road (Section 4)*

Bethells Road is a self-explaining road as the mean operating speeds on all sections of the road are below or near the proposed safe and appropriate speeds, despite the higher existing speed limits. Engineering up of Bethells Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Bethells Road between Waitakere Road and 75m west of Waitakere Road (Section 1) to match the proposed speed limit on the adjacent section of Waitakere Road.

It is proposed to maintain the existing speed limit of 50 km/h for Bethells Road between 75m west of Waitakere Road and 85m east of Wairere Road (Section 2) including the existing 40 km/h variable school speed zone between 40m west of Anzac Valley Road and 360m west of Anzac Valley Road.

This existing permanent and variable speed limit are considered appropriate given the presence of a school on the road.

A proposed speed limit of 60 km/h was selected for Bethells Road between 85m east of Wairere Road and 360m east of Tasman View Road (Section 3) due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 56 km/h. All these factors contribute to the road's 'High' IRR score, making this section a high-risk road.<sup>2</sup>

It is proposed to maintain the existing speed limit of 50 km/h for Bethells Road between 360m east of Tasman View Road and the western end of the road (Section 4) due to the 'Rural Town' classification of the road and the likely presence of active road users.

Where speed limit changes are proposed, the proposed safe and appropriate speed limit is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Brabant Road (Waiatarua)

The speed limit on Brabant Road, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Brabant Road connects to Scenic Drive to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.1 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Brabant Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt; 3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Scenic Drive:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.10
Annual Daily Traffic	25

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Remote Rural	1.00
Intersection density (per km)	5 to <10	2.60
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.39. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Brabant Road.*

Brabant Road is a self-explaining road as the mean operating speeds (37 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Brabant Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Brabant Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 37 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Brabant Road in Waitarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed. Given the very short length of the road it was also considered appropriate to match the speed limit to the proposed speed limit on the adjacent road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Bush Road (Waiatarua)

The speed limit on Bush Road, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bush Road connects to West Coast Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.78 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Bush Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 392 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Atarua Gardens:</b> 70 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.78
Annual Daily Traffic	392

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.04. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Bush Road.*

Bush Road is a self-explaining road as the mean operating speeds (27 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Bush Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Bush Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 27 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Bush Road in Waiatarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Candia Road (Henderson Valley)

Candia Road, Henderson Valley, is divided into two sections as follows:<sup>1</sup>

- Section 1: Candia Road between 20m north of the northern end of Coulter Road and the Urban Traffic Boundary (Auckland Isthmus)
- Section 2: Candia Road between the Urban Traffic Boundary (Auckland Isthmus) and Henderson Valley Road

These sections were separated as Section 1 is within the Urban Traffic Area (Auckland Isthmus) and Section 2 is not.

The speed limit on Candia Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Candia Road connects to Pooks Road and North Candia Road to the north and to Henderson Valley Road to the south. This road provides access to rural residential properties.	
	This section is approximately 0.39 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 2.81 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on a section of the road near Henderson Valley Road. There are no cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 30 crashes between 2016 and 2020: 0 fatal, 1 serious, 13 minor and 16 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Candia Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Candia Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	
	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,909 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 3,909 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Candia Road (north of a point 20m north of the northern end of Coulter Road):</b> 50 km/h</li> <li>• <b>Coulter Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Simpson Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Sturges Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Vineyard Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Henderson Valley Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	14
DSI crashes during the period	0	1
Corridor Length (km)	0.39	2.81
Annual Daily Traffic	3,909	3,909

- Section 1

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.07. For rural areas this corresponds to a Collective Risk band of **Medium**
  - The Personal Risk score is 5.0. For rural areas this corresponds to a Personal Risk band of **Low-Medium**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	2 to <3	1.25
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.4	1,000 to <6,000	1.4

- Section 1
  - The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for both sections of Candia Road.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is:

- 60 km/h on Candia Road between 20m north of the northern end of Coulter Road and the Urban Traffic Area Boundary (Auckland Isthmus)
- 60 km/h on Candia Road between the Urban Traffic Area Boundary (Auckland Isthmus) and Henderson Valley Road

Candia Road is a self-explaining road as the mean operating speeds (59 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Candia Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Candia Road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 59 km/h. All these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road<sup>2</sup>. Furthermore, crash history from NZTA's CAS database shows 30 crashes in the last 5 years on the road including 0 fatal, 1 serious, 13 minor and 16 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Candia Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Carter Road (Oratia)

The speed limit on Carter Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Carter Road connects to West Coast Road to the north and to Shaw Road to the south. This road provides access to rural residential properties.</p> <p>This section is approximately 4.04 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 1 serious, 2 minor and 2 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Carter Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 781 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Cochran Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Shaw Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	4.04
Annual Daily Traffic	781

- The Collective Risk score is 0.05. For rural areas this corresponds to a Collective Risk band of **Low-Medium**

- The Personal Risk score is 17.36. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Carter Road.*

Carter Road is a self-explaining road as the mean operating speeds (49 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Carter Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Carter Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside

hazards, and low mean operating speed of 49 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 5 crashes in the last 5 years including 0 fatal, 1 serious, 2 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Carter Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Cascade Avenue (Waiatarua)

The speed limit on Cascade Avenue, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cascade Avenue connects to West Coast Road to the west and is a no-exit road at the eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.36 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Cascade Avenue were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 218 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.36
Annual Daily Traffic	218

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.22. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Cascade Avenue.*

Cascade Avenue is a self-explaining road as the mean operating speeds (28 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Cascade Avenue was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Cascade Avenue due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 28 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Cascade Avenue in Waitatarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Caton Road (Waitakere)**

The speed limit on Caton Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Caton Road connects to Wairere Road to the south and is a no-exit road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 1.79 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Caton Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 239 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 32 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.79
Annual Daily Traffic	239

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.36. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Caton Road.*

Caton Road is a self-explaining road as the mean operating speeds (32 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Caton Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Caton Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 32 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Caton Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Cochran Road (Oratia)**

The speed limit on Cochran Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Cochran Road connects to Carter Road to the north and is a no-exit road at the southern end.</p> <p>This section is approximately 0.52 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Road Name were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 360 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Carter Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.52
Annual Daily Traffic	360

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.07. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Cochran Road.*

Cochran Road is a self-explaining road as the mean operating speeds (30 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Cochran Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Cochran Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 30 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Cochran Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Cornwallis Road (Cornwallis)**

Cornwallis Road, Cornwallis, is divided into two sections as follows: <sup>1</sup>

- Section 1: Cornwallis Road between Huia Road and 990m south of Huia Road
- Section 2: Cornwallis Road between 990m south of Huia Road and the southern end of the road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Cornwallis Road, Cornwallis has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Cornwallis Road connects to Huia Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties and to Cornwallis Beach.	
	This section is approximately 0.99 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.43 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Cornwallis Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: <i>"Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."</i>	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 327 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 218 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 35 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Huia Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.99	1.43
Annual Daily Traffic	327	218

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

#### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Remote Rural	1.00	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	<1	1.00
Access density (per km)	1 to <2	1.01	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.30. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h for Section 1 and less than 80 km/h for Section 2.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Cornwallis Road between Huia Road and 990m south of Huia Road (Section 1)
- 40 km/h on Cornwallis Road between 990m south of Huia Road and the southern end of the road (Section 2)

Cornwallis Road is a self-explaining road as the mean operating speeds (58 km/h and 35 km/h for Section 1 and Section 2 respectively) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h and 50 km/h speed limits. Engineering up of Cornwallis Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Section 1 of Cornwallis Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, moderate roadside hazards, and low mean operating speed of 58 km/h. All these factors contribute to the road's 'Medium' IRR score.

After considering all the above factors, the existing speed limit of 100 km/h on Section 1 of Cornwallis Road in Cornwallis is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit for Cornwallis Road is 60 km/h, which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the nature and function of the road and the mean operating speed (58 km/h) supports the reduction. It also aligns with the proposed speed limit of the adjacent section of Huia Road.

A proposed speed limit of 40 km/h was selected for Section 2 of Cornwallis Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 35 km/h.

After considering all the above factors, the existing speed limit of 50 km/h on Section 2 of Cornwallis Road in Cornwallis is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Coulter Road (Henderson Valley)

The speed limit on Coulter Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Coulter Road is a loop road that connects to Candia Road at both ends. This road provides access to rural residential properties.</p> <p>This section is approximately 3.81 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 3 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Coulter Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 225 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Candia Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Perris Road:</b> 100km/h (proposed 40 km/h)</li> <li><b>Vineyard Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Drower Road:</b> 100km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	3.81
Annual Daily Traffic	225

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Coulter Road.*

Coulter Road is a self-explaining road as the mean operating speeds (42 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Coulter Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Coulter Road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 42 km/h.

All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 4 crashes in the last 5 years on the road including 0 fatal, 0 serious, 1 minor and 3 non-injury crashes.

After considering all the above factors, the existing speed limit of 100 km/h on Coulter Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Crows Road (Swanson)

The speed limit on Crows Road (section between 545m south-west of Birdwood Road and Sunnyvale Road), Swanson, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Crows Road connects to Birdwood Road to the east and Sunnyvale Road to the north-west. This road provides access to rural residential properties.</p> <p>This section is approximately 2.07 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 0 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Crows Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and wide narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,015 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Crows Road (east of a point 545m south-west of Birdwood Road):</b> 50 km/h</li> <li><b>Sunnyvale Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

<b>Required Information for safety metrics calculations</b>	<b>Data</b>
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	0
Corridor Length (km)	2.07
Annual Daily Traffic	2,015

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the section of Crows Road between 545m south-west of Birdwood Road and Sunnyvale Road.*

Crows Road is a self-explaining road as the mean operating speeds (45 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Crows Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Crows Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 45 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road<sup>1</sup>.

After considering all the above factors, the existing speed limit of 80 km/h on Crows Road in Swanson is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Drower Road (Swanson)

The speed limit on Drower Road, Swanson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Drower Road connects to O'Neills Road to the north and to Coulter Road to the south. This road provides access to rural residential properties.</p> <p>This section is approximately 0.81 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Drower Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 47 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 33 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>O'Neills Road:</b> 60 km/h</li> <li><b>Coulter Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.81
Annual Daily Traffic	47

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.44. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Drower Road.*

Drower Road is a self-explaining road as the mean operating speeds (33 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Drower Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Drower Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 33 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Drower Road in Swanson is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Duffy Road (Waitakere)

The speed limit on Duffy Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Duffy Road connects to Bethells Road to the south and Wairere Road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 1.21 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 non-injury crashes between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Duffy Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 136 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 44 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Tyndel Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.21
Annual Daily Traffic	136

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.02. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Duffy Road.*

Duffy Road is a self-explaining road as the mean operating speeds (44 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Duffy Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Duffy Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside

hazards, and low mean operating speed of 44 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 80 km/h on Duffy Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Falls Road (Waitakere)

Falls Road, Waitakere, is divided into two sections as follows:<sup>1</sup>

- Section 1: Falls Road between Te Henga Road and 970m south of Te Henga Road
- Section 2: Falls Road between 970m south of Te Henga Road and the southern end of the road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Falls Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Falls Road connects to Te Henga Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties, a golf course and Scenic Reserve.	
	This section is approximately 0.97 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.03 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Falls Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 170 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Te Henga Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.97	1.03
Annual Daily Traffic	170	170

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Unsealed	10.00
Road alignment	Tortuous	6.00	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	5 to <10	1.06	1 to <2	1.01
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.16. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.34. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Falls Road.*

Falls Road is a self-explaining road as the mean operating speeds (26 to 34 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Falls Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Falls Road due to a multitude of factors. These included the unsealed road surface on part of the road, narrow lane widths and very narrow shoulders, winding / tortuous road alignment, high roadside hazards, and low mean operating speed of 26 to 34 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Falls Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h for the full length of the road, which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Forest Hill Road (Henderson / Waiaatarua)**

Forest Hill Road, Henderson / Waiaatarua, is divided into two sections as follows: <sup>1</sup>

- Section 1: Forest Hill Road between Pine Avenue and 35m south of Holdens Road
- Section 2: Forest Hill Road between 35m south of Holdens Road and West Coast Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). They also have different existing posted speed limits. Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Forest Hill Road, Henderson / Waiaatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Forest Hill Road connects to Henderson Valley Road to the north-east and to West Coast Road south-west. This road provides access to rural residential properties.	
	This section is approximately 0.73 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 4.49 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on this section of road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 5 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 16 crashes between 2016 and 2020: 0 fatal, 1 serious, 7 minor and 8 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Forest Hill Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Forest Hill Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,539 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,682 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h. However, it is noted the speed limit is currently posted as 50 km/h on this section.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 53 km/h.	This section has a mean operating speed of 57 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Forest Hill Road (west of Pine Avenue):</b> 50 km/h</li> <li>• <b>Holdens Road:</b> 50 km/h (posted speed limit)</li> <li>• <b>Kellys Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Old Forest Hill Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Cascade Avenue:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	2	8
DSI crashes during the period	1	1
Corridor Length (km)	0.73	4.49
Annual Daily Traffic	2,539	1,682

- Section 1

- o The Collective Risk score is 0.27. For urban areas this corresponds to a Collective Risk band of **High**
- o The Personal Risk score is 29.56. For urban areas this corresponds to a Personal Risk band of **High**
- Section 2
  - o The Collective Risk score is 0.04. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
  - o The Personal Risk score is 7.26. For rural areas this corresponds to a Personal Risk band of **Medium-High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, narrow shoulder	1.45	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Urban Residential	3.00	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15
Access density (per km)	20+	1.30	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

- Section 1
  - o The Infrastructure Risk Rating Score is 2.27. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - o The Infrastructure Risk Rating Score is 2.13. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h for the section of Forest Hill Road between Pine Avenue and 35m south of Holdens Road 40 km/h.

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for the section of Forest Hill Road between 35m south of Holdens Road and West Coast Road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Forest Hill Road between Pine Avenue and 35m south of Holdens Road
- 60 km/h on Forest Hill Road between 35m south of Holdens Road and West Coast Road

Forest Hill Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit on most of the road. Engineering up of Forest Hill Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Forest Hill Road between Pine Avenue and 35m south of Holdens Road due to a multitude of factors. These included the fact the road is already signed with a 50 km/h speed limit, the curved road alignment, high roadside hazards, and low mean operating speed of 53 km/h.

A proposed speed limit of 60 km/h was selected for Forest Hill Road between 35m south of Holdens Road and West Coast Road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 57 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 16 crashes in the last 5 years on this section of road including 0 fatal, 1 serious, 7 minor and 8 non-injury crashes.

After considering all the above factors, the existing speed limits of 70 km/h and 100 km/h on Forest Hill Road in Henderson / Waiatarua are not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limits are 50 km/h (for Section 1) and 60 km/h (for Section 2), which are aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Grassmere Road (Henderson Valley)

The speed limit on Grassmere Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Grassmere Road connects to Opanuku Road to the north-west and is a no-exit road at the south-eastern end. This road provides access to rural residential properties.
	This section is approximately 1.17 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on part of the road, but there are no cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Grassmere Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,305 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 38 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Opanuku Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Napuka Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.17
Annual Daily Traffic	1,305

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 1.73. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Grassmere Road.*

Grassmere Road is a self-explaining road as the mean operating speeds (38 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Grassmere Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Grassmere Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, and low mean operating speed of 38 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> A 40 km/h speed limit also matches the proposed speed limit on the adjacent road, which is appropriate given Grassmere Road is a no-exit road.

After considering all the above factors, the existing speed limit of 50 km/h on Grassmere Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Gregory Road (Waitakere)

The speed limit on Gregory Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gregory Road connects to Wairere Road to the south and is a no-exit road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 1.19 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Gregory Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 114 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.19
Annual Daily Traffic	114

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.34. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Gregory Road.*

Gregory Road is a self-explaining road as the mean operating speeds (30 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Gregory Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Gregory Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 30 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Gregory Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Gum Road (Henderson Valley)

The speed limit on Gum Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gum Road connects to Henderson Valley Road to the north and is a no-exit road to the south. This road provides access to rural residential properties.</p> <p>This section is approximately 0.99 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Gum Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 188 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h. There is also a 40 km/h variable school speed limit on the section of Gum Road from Henderson Valley Road to 40m south of Henderson Valley Road.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Henderson Valley Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.99
Annual Daily Traffic	188

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.70. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Gum Road (with a 40 km/h variable school speed limit on the section of Gum Road from Henderson Valley Road to 40m south of Henderson Valley Road)*

Gum Road is a self-explaining road as the mean operating speeds (34 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Gum Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Gum Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside

hazards, and low mean operating speed of 34 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Gum Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Haszard Road (Massey)

The speed limit on Haszard Road, Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Haszard Road connects to Sunnyvale Road to the east and is a no-exit road at the western end of the road. This road provides access to rural residential properties.</p> <p>This section is approximately 0.18 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Haszard Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 73 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Sunnyvale Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.18
Annual Daily Traffic	73

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	5 to <10	2.60
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.85. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Haszard Road.*

Haszard Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Haszard Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Haszard Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, moderate roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Haszard Road in Massey is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Hayes Road (Henderson Valley)

The speed limit on Hayes Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hayes Road connects to Mountain Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.29 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Hayes Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mountain Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.29
Annual Daily Traffic	104

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.53. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Hayes Road.*

Hayes Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Hayes Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Hayes Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Hayes Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Henderson Valley Road (Henderson Valley)

Henderson Valley Road, Henderson Valley, is divided into two sections as follows: <sup>1</sup>

- Section 1: Henderson Valley Road between 710m west of Pine Avenue and the Urban Traffic Area Boundary (Auckland Isthmus)
- Section 2: Henderson Valley Road between the Urban Traffic Area Boundary (Auckland Isthmus) and Opanuku Road

These sections were chosen as Section 1 is within the Urban Traffic Area whereas Section 2 is outside the Urban Traffic Area.

The speed limit on Henderson Valley Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Henderson Valley Road connects to Great North Road to the north-east and to Mountain Road and Opanuku Road to the south-west. This road provides access to residential properties.	
	This section is approximately 0.14 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 2.73 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on the road but no cycle amenities. On-street parking is provided for along most of this section of road.	This section is a two-way, two-lane, undivided road. There is a footpath on the road but no cycle amenities. There is some on-street parking provision in the vicinity of Henderson Valley School.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 23 crashes between 2016 and 2020: 0 fatal, 2 serious, 9 minor and 12 non-injury crashes. This resulted in 2 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Henderson Valley Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Henderson Valley Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,162 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3,295 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 70 km/h. There is a variable 40 km/h school speed limit between 100m west of Candia Road and 330m west of Gum Road.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.	This section has a mean operating speed of 59 to 61 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Candia Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Gum Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Opanuku Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Mountain Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	11
DSI crashes during the period	0	2
Corridor Length (km)	0.14	2.73
Annual Daily Traffic	6,162	3,295

- Section 1

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score for part of this section is 0.28. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score for part of the section is 23.4. For rural areas this corresponds to a Personal Risk band of **High**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, wide shoulder	1.00	Medium lane, wide shoulder	1.00
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	6,000 to <12,000	2.20	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.81. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.68. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for both sections of road.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 60 km/h for Henderson Valley Road between 710m west of Pine Avenue and Opanuku Road (Sections 1 and 2). It is also proposed to maintain the existing 40 km/h variable school speed zone between 100m west of Candia Road and 330m west of Gum Road.

Henderson Valley Road is a self-explaining road as the mean operating speeds (59 to 61 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Henderson Valley Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Henderson Valley Road due to a multitude of factors. These included the curved road alignment, high roadside hazards, and low mean operating speed. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 23 crashes on the road in the last 5 years including 0 fatal, 2 serious, 9 minor and 12 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Henderson Valley Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h, (with a 40 km/h variable school speed zone between 100m west of Candia and 330m west of Gum Road), which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Holdens Road (Henderson)

The speed limit on Holdens Road, Henderson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Holdens Road connects to Forest Hill Road to the south-west and to Parrs Cross Road to the north-east. This road provides access to rural residential properties.</p> <p>This section is approximately 1.06 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Holdens Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 480 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h although it is noted the posted speed limit on the road is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Parrs Cross Road:</b> 50 km/h</li> <li>• <b>Forest Hill Road:</b> posted speed limit 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.06
Annual Daily Traffic	480

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.71. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the full length of Holdens Road.*

Holdens Road is a self-explaining road as the mean operating speeds (47 km/h) are below or near the proposed safe and appropriate speeds. Engineering up of Holdens Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Holdens Road due to a multitude of factors. These included the curved road alignment, high roadside hazards, low mean operating speed of 47 km/h, and

the fact the road has been posted with a 50 km/h speed limit for some time. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing bylaw speed limit of 100 km/h for Holdens Road in Henderson is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed, and it is also the current posted speed limit on the road.

## **Speed Limit Review – Horsman Road (Waitakere)**

The speed limit on Horsman Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Horsman Road connects to Jonkers Road and Wairere Road to the south-east and is a no-exit road at the north-western end. This road provides access to rural residential properties.</p> <p>This section is approximately 1.69 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Horsman Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 216 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Jonkers Road:</b> 80 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.69
Annual Daily Traffic	216

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.36. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Horsman Road.*

Horsman Road is a self-explaining road as the mean operating speeds (34 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Horsman Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Horsman Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 34 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Horsman Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Huia Road (Laingholm and Huia)**

The section of Huia Road, Laingholm / Huia, between 425m west of Victory Road and Whatipu Road is divided into six sections as follows:<sup>1</sup>

- Section 1: Huia Road between 425m west of Victory Road and 1,020m north of Staley Road
- Section 2: Huia Road between 1,020m north of Staley Road and 90m west of Shirley Road
- Section 3: Huia Road between 90m west of Shirley Road and 630m east of Foster Avenue
- Section 4: Huia Road between 630m east of Foster Avenue and 70m south of Huia Dam Road
- Section 5: Huia Road between 70m south of Huia Dam Road and 1,260m south of Huia Dam Road
- Section 6: Huia Road between 1,260m south of Huia Dam Road and Whatipu Road

These sections are all within the Rural Traffic Area and were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on the section of Huia Road, Laingholm / Huia between 425m west of Victory Road and Whatipu Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Sections 1, 2 and 3*

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Huia Road connects to Titirangi Road to the east and Whatipu Road to the west. This road provides access to rural residential properties.		
	This section is approximately 1.03 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 1.78 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 5.37 km in length. It is classified as an Arterial road under the one network road classification (ONRC).

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath along sections of this road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 6 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 10 crashes between 2016 and 2020: 0 fatal, 3 serious, 1 minor and 6 non-injury crashes. This resulted in 3 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 11 crashes between 2016 and 2020: 0 fatal, 0 serious, 6 minor and 5 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	A part of Huia Road is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Huia Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> </ul>

Requirement	Comments		
	Section 1	Section 2	Section 3
	<ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: " <i>Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present.</i> "	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: " <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,344 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,966 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,671 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments		
	Section 1	Section 2	Section 3
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

Table 2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Sections 4, 5 and 6

Requirement	Comments		
	Section 4	Section 5	Section 6
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Huia Road connects to Titirangi Road to the east and Whatipu Road to the west. This road provides access to rural residential properties.		
	This section is approximately 1.68 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.19 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.11 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on the road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 minor injury crashes between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 minor injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Huia Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."

(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 707 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 440 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1 and 2, further relevant information was sought as summarised in Table 3 and 4 below.

Table 3: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 50 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 56 km/h.	This section has a mean operating speed of 64 km/h.	This section has a mean operating speed of 65 km/h.

Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Rauhuia Crescent:</b> 50 km/h</li> <li><b>Staley Road Crescent:</b> 50 km/h</li> <li><b>Armour Road:</b> 50 km/h</li> <li><b>Rauhuia Crescent:</b> 50 km/h</li> <li><b>Shirley Road:</b> 50 km/h</li> <li><b>Cornwallis Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Foster Avenue:</b> 50 km/h</li> <li><b>Upland Road:</b> 50 km/h</li> <li><b>Huia Dam Road:</b> 50 km/h</li> <li><b>Whatipu Road:</b> 70 km/h (proposed 40 km/h)</li> </ul>
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AT also had regard to	Section 4	Section 5	Section 6
Current speed limit	The existing speed limit is 50 km/h.	The existing speed limit is 70 km/h.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.	This section has a mean operating speed of 38 km/h.	This section has a mean operating speed of 38 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Rauhuia Crescent:</b> 50 km/h</li> <li><b>Staley Road Crescent:</b> 50 km/h</li> <li><b>Armour Road:</b> 50 km/h</li> <li><b>Rauhuia Crescent:</b> 50 km/h</li> <li><b>Shirley Road:</b> 50 km/h</li> <li><b>Cornwallis Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Foster Avenue:</b> 50 km/h</li> <li><b>Upland Road:</b> 50 km/h</li> <li><b>Huia Dam Road:</b> 50 km/h</li> <li><b>Whatipu Road:</b> 70 km/h (proposed 40 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	4	6
DSI crashes during the period	1	3	0
Corridor Length (km)	1.03	1.78	5.37
Annual Daily Traffic	3,344	1,966	1,671

Required Information for safety metrics calculations	Data		
	Section 4	Section 5	Section 6
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	2	0	1
DSI crashes during the period	0	0	0
Corridor Length (km)	1.68	1.19	1.11
Annual Daily Traffic	707	440	440

- Section 1
  - The Collective Risk score is 0.19. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 15.91. For rural areas this corresponds to a Personal Risk band of **High**
- Section 2
  - The Collective Risk score is 0.97. For urban areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 134.86. For urban areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 4
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 5
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 6
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Town	2.50
Intersection density (per km)	<1	1.00	2 to <3	1.25
Access density (per km)	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Remote Rural	1.00	Rural Town	2.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	1 to <2	1.01	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40	<1,000	1.00

Feature	Section 5		Section 6	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.50	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	Severe	2.80
Adjacent land use	Rural Town	2.50	Rural Town	2.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	5 to <10	1.06	1 to <2	1.01
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.77. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.12. For urban areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.38. For rural areas this corresponds to an IRR band of **Medium**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.
- Section 5
  - The Infrastructure Risk Rating Score is 2.15. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 6
  - The Infrastructure Risk Rating Score is 2.45. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- Less than 80 km/h (Section 1)
- 50 km/h (Section 2)
- 80 km/h (Section 3)
- 50 km/h (Section 4 and 5)
- Less than 50 km/h (Section 6)

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Huia Road between 425m west of Victory Road and 1,020m north of Staley Road (Section 1)
- 50 km/h on Huia Road between 1,020m north of Staley Road and 90m west of Shirley Road (Section 2)
- 60 km/h on Huia Road between 90m west of Shirley Road and 630m east of Foster Avenue (Section 3)
- 50 km/h on Huia Road between 630m east of Foster Avenue and 70m south of Huia Dam Road (Section 4)
- 60 km/h on Huia Road between 70m south of Huia Dam Road and 1,260m south of Huia Dam Road (Section 5)
- 40 km/h on Huia Road between 1,260m south of Huia Dam Road and Whatipu Road (Section 6)

No change to the existing speed limit is proposed on Section 2 and Section 4 of Huia Road as the current 50 km/h speed limits are considered to be a safe and appropriate speed limit.

Sections 1, 5 and 6 of Huia Road are self-explaining roads as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing speed limits. The mean operating speed of Section 3 (65 km/h) is slightly higher than the proposed safe and appropriate speed (60 km/h); however, this is considered acceptable as the section of road still has several bends with a lower operating speed. Engineering up of Huia Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Section 1, Section 3, and Section 5 of Huia Road due to a multitude of factors. These included the curved / winding road alignment, moderate / high roadside hazards, and generally low mean operating speeds. All these factors contribute to the road's 'Medium' to 'Medium-High' IRR score.

A proposed speed limit of 40 km/h was selected for Section 6 of Huia Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, severe roadside hazards, and low mean operating speed of 38 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk section of road.

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Sections 1, 3, 5 and 6 of Huia Road in Laingholm / Huia are not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit for Section 1 of Huia Road is 60 km/h which is aligned with the recommended safe and appropriate speed.

The proposed safe and appropriate speed limit for Section 3 of Huia Road is 60 km/h, which is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the nature and function of the road. It is also noted that the mean operating speed (65 km/h) is slightly higher than the proposed speed limit, but there are still several sections of the road where the operating speed is lower.

The proposed safe and appropriate speed limit for Section 5 of Huia Road is higher than the Speed Management Guide recommendation (50 km/h) but is considered appropriate given the nature and function of the road. While this section of road is classified as a 'Rural Town', the development along it is sporadic, and a 50 km/h speed limit is unlikely to be credible or supported by the public due.

The proposed safe and appropriate speed limit for Section 6 of Huia Road is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limits on Huia Road improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Jonkers Road (Waitakere)**

The speed limit on Jonkers Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Jonkers Road connects to Horsman Road and Wairere Road to the north-east and is a no-exit road at the south-western end. This road provides access to rural residential properties.</p> <p>This section is approximately 1.45 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Road Name were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 93 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Horsman Road:</b> 80 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.45
Annual Daily Traffic	93

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.58. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Jonkers Road.*

Jonkers Road is a self-explaining road as the mean operating speeds (30 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Jonkers Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Jonkers Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 30 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Jonkers Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Karekare Road (Karekare)**

Karekare Road, Karekare, is divided into two sections as follows:<sup>1</sup>

- Section 1: Karekare Road between Piha Road and 880m north of Watchmans Road
- Section 2: Karekare Road between 880m north of Watchmans Road and Lone Kauri Road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Karekare Road, Karekare has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Karekare Road connects to Piha Road to the north and to Lone Kauri Road to the south. This road provides access to rural residential properties and Karekare Beach.	
	This section is approximately 1.76 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 1.07 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section. There are traffic calming devices (speed humps) on this section of road.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Karekare Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 827 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 383 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28 km/h.	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Piha Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Watchmans Road:</b> 50km/h (proposed 40 km/h)</li> <li>• <b>Lone Kauri Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.76	1.07
Annual Daily Traffic	827	383

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2

- o The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- o The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Town	2.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	<1	1.00	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - o The Infrastructure Risk Rating Score is 2.22. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - o The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for Section 1 and less than 50 km/h for Section 2.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is 40 km/h for the full length of Karekare Road (Section 1 and 2)*

Karekare Road is a self-explaining road as the mean operating speeds (27 and 28 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 and 100 km/h speed limits. Engineering up of Karekare Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Karekare Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding / tortuous road alignment, high / severe roadside hazards, and low mean operating speed. All these factors contribute to the road's 'High' IRR score on Section 1, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limits of 50 and 100 km/h on Karekare Road in Karekare are not considered to be safe and appropriate speed limits for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kauri Loop Road (Oratia)

The speed limit on Kauri Loop Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kauri Loop Road is a crescent that connects to West Coast Road and its north-eastern and south-western ends. This road provides access to rural residential properties.</p> <p>This section is approximately 0.79 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kauri Loop Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 203 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.79
Annual Daily Traffic	203

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.36. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Kauri Loop Road.*

Kauri Loop Road is a self-explaining road as the mean operating speeds (23 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Kauri Loop Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Kauri Loop Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, severe roadside hazards, and low mean operating speed of 23 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Kauri Loop Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Kay Road (Swanson)

The speed limit on Kay Road, Swanson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kay Road connects to Sunnyvale Road and McEntee Road to the north and Waitakere Road to the south. This road provides access to rural residential properties.</p> <p>This section is approximately 1.37 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There is a footpath on a section of the road. There are no cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 1 serious, 2 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kay Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 638 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Waitakere Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Sunnyvale Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>McEntee Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	1.37
Annual Daily Traffic	638

- The Collective Risk score is 0.15. For rural areas this corresponds to a Collective Risk band of **Medium-High**
- The Personal Risk score is 62.7. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kay Road.*

Kay Road is a self-explaining road as the mean operating speeds (47 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Kay Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kay Road due to a multitude of factors. These included the very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 47 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 4 crashes in the last 5 years on the road including 0 fatal, 1 serious, 2 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Kay Road in Swanson is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kellys Road (Oratia)

The speed limit on Kellys Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kellys Road connects to Forest Hill Road to the north and West Coast Road to the south. This road provides access to residential properties.</p> <p>This section is approximately 1.06 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 3 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kellys Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,802 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Forest Hill Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	1.06
Annual Daily Traffic	1,802

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 2.37. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Kellys Road.

Kellys Road is a self-explaining road as the mean operating speeds (42 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Kellys Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Kellys Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 42 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road<sup>1</sup>. Furthermore, the crash history from NZTA's CAS database shows 3 crashes in the last 5 years including 0 fatal, 0 serious, 1 minor and 2 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Kellys Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kokako Grove (Bethells Beach)

The speed limit on Kokako Grove, Bethells Beach has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kokako Grove connects to Te Aute Ridge Road to the east and is a no-exit road to the west. This road provides access to rural residential properties.</p> <p>This section is approximately 0.55 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Kokako Grove were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Aute Ridge Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.55
Annual Daily Traffic	52

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Kokako Grove.*

Kokako Grove is a self-explaining road as the mean operating speeds (27 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kokako Grove was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Kokako Grove due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 27 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Kokako Grove in Bethells Beach is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – La Trobe Track (Karekare)

The speed limit on La Trobe Track, Karekare has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>La Trobe Track connects to Lone Kauri Road to the north-east and is a no-exit road to the south-west. This road provides access to rural residential properties.</p> <p>This section is approximately 0.96 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of La Trobe Track were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was estimated at 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Lone Kauri Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.96
Annual Daily Traffic	20

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.43. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of La Trobe Track.*

La Trobe Track is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of La Trobe Track was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for La Trobe Track due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on La Trobe Track in Karekare is not considered to be a safe and appropriate speed limit for this road. The proposed safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Lone Kauri Road (Karekare)

Lone Kauri Road, Karekare, is divided into two sections as follows:<sup>1</sup>

- Section 1: Lone Kauri Road between Piha Road and 390m south of Watchmans Road
- Section 2: Lone Kauri Road between 390m south of Watchmans Road and Karekare Road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Lone Kauri Road, Karekare has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Lone Kauri Road connects to Piha Road to the north-east and to Karekare Road to the south-west. This road provides access to residential properties.	
	This section is approximately 8.36 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.2 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Lone Kauri Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 222 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 358 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 35 km/h.	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Karekare Road:</b> 50 km/h (proposed 40 km/h)</li> <li>• <b>Waikarekare Lane:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>La Trobe Track:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Piha Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	0	0
Corridor Length (km)	8.36	0.20
Annual Daily Traffic	222	358

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80
Adjacent land use	Remote Rural	1.00	Rural Town	2.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	<1	1.00	1 to <2	1.01
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.45. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for Section 1 and less than 50 km/h for Section 2.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Lone Kauri Road.*

Lone Kauri Road is a self-explaining road as the mean operating speeds (26 to 35 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 and 100 km/h speed limits. Engineering up of Lone Kauri Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Lone Kauri Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, severe

roadside hazards, and low mean operating speeds. All these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limits of 50 and 100 km/h on Lone Kauri Road in Karekare are not considered to be safe and appropriate speed limits for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Long Road (Waitakere)

The speed limit on Long Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Long Road connects to Bethells Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 1.02 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Road Name were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 638 vehicles per day (vpd). This level of traffic volume is considered relatively high for a rural no-exit road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.02
Annual Daily Traffic	638

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.62. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Long Road.*

Long Road is a self-explaining road as the mean operating speeds (30 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Long Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Long Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 30 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Long Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – McEntee Road (Waitakere)**

McEntee Road, Waitakere, is divided into two sections as follows:<sup>1</sup>

- Section 1: McEntee Road between Township Road and 140m east of Amreins Road
- Section 2: McEntee Road between 140m east of Amreins Road and Kay Road

These sections were chosen as they currently have different speed limits. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on McEntee Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	McEntee Road connects to Township Road to the west and to Kay Road and Sunny vale Road to the east. This road provides access to rural residential properties.	
	This section is approximately 1.54 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.7 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on this section of road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 1 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of McEntee Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,452 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,452 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.	This section has a mean operating speed of 60 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Township Road (south of McEntee Road):</b> 70 km/h (proposed 50 km/h)</li> <li>• <b>Township Road (north of McEntee Road):</b> 50 km/h</li> <li>• <b>Northfield Road:</b> 50 km/h</li> <li>• <b>Amreins Road:</b> 50 km/h</li> <li>• <b>Kay Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Sunnyvale Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	1
DSI crashes during the period	0	0
Corridor Length (km)	1.54	0.70
Annual Daily Traffic	1,452	1,452

- Section 1

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, narrow shoulder	1.45	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25	1 to <2	1.15
Access density (per km)	20+	1.30	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on McEntee Road between Township Road and 140m east of Amreins Road
- 60 km/h on McEntee Road between 140m east of Amreins Road and Kay Road

McEntee Road is a self-explaining road as the mean operating speeds (55 and 60 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 and 70 km/h speed limits. Engineering up of McEntee Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

Maintaining the existing speed limit of 50 km/h for McEntee Road between Township Road and 140m east of Amreins Road is considered appropriate due to the number of residential properties on this section of road. A proposed speed limit of 60 km/h was selected for McEntee Road between 140m east of Amreins Road and Kay Road due to a multitude of factors. These included the curved road alignment, high roadside hazards, and mean operating speed of 60 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limit of 80 km/h on the section of McEntee Road between 140m east of Amreins Road and Kay Road in Waitakere is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Mildon Road (Waitakere)

The speed limit on Mildon Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mildon Road connects to Wairere Road to the east and is a no-exit road at the western end of the road. This road provides access to rural residential properties.</p> <p>This section is approximately 0.4 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there have been zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mildon Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 57 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Wairere Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.40
Annual Daily Traffic	57

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.18. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Mildon Road.*

Mildon Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Mildon Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Mildon Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Mildon Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Mount Donald McLean Road (Huia)

The speed limit on Mount Donald McLean Road, Huia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mount Donald McLean Road connects to Whatipu Road to the south and is a no-exit road at the northern end. This road provides access to the Waitakere Ranges Regional Park.</p> <p>This section is approximately 0.99 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Mount Donald McLean Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 18 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 21 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Whatipu Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.99
Annual Daily Traffic	18

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Remote Rural	1.00
Intersection density (per km)	1 to <2	1.15
Access density (per km)	<1	1.00
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.30. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Mount Donald McLean Road.*

Mount Donald McLean Road is a self-explaining road as the mean operating speeds (21 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Mount Donald McLean Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Mount Donald McLean Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, severe roadside hazards, and low mean operating speed of 21 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Mount Donald McLean Road in Huia is not considered to be a safe and appropriate speed limit for this road. The proposed

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Mountain Road (Henderson Valley)

Mountain Road, Henderson Valley, is divided into three sections as follows:<sup>1</sup>

- Section 1: Mountain Road between Scenic Drive and 50m north of Scenic Drive
- Section 2: Mountain Road between 50m north of Scenic Drive and 1,860m east of Turanga Road
- Section 3: Mountain Road between 1,860m east of Turanga Road and Opanuku Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Mountain Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Mountain Road connects to Scenic Drive to the west and to Opanuku Road and Henderson Valley Road to the east. This road provides access to rural residential properties.		
	This section is approximately 0.05 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 2.20 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.88 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).

	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 2 non-injury crashes between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 serious crash between 2016 and 2020. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Road Name is identified as one of the top 10% DSI saving network sections for New Zealand.		
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Mountain Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &gt;10 intersections per km</li> <li><b>Access density:</b> &lt;1 access per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> &lt;1 access per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 access per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 472 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 472 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 472 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is: <ul style="list-style-type: none"> <li>70 km/h between 50m east of Scenic Drive and 325m east of Turanga Road</li> <li>100 km/h between 325m east of Turanga Road and 1,860m east of Turanga Road</li> </ul>	The existing speed limit is: <ul style="list-style-type: none"> <li>100 km/h between 1,860m east of Turanga Road and 920m west of Hayes Road</li> <li>70 km/h between 920m west of Hayes Road and Opanuku Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 45 km/h.	This section has a mean operating speed of 38 km/h.	This section has a mean operating speed of 50 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Scenic Drive:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Turanga Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Walker Road:</b> 100 km/h (proposed 40 km/h)</li> <li><b>Hayes Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Opanuku Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Henderson Valley Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	1
DSI crashes during the period	0	0	1
Corridor Length (km)	0.05	2.20	1.88
Annual Daily Traffic	472	472	472

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.15. For rural areas this corresponds to a Collective Risk band of **Medium-High**
  - The Personal Risk score is 85.4. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Straight	1.00	Tortuous	6.00
Carriageway width	Medium lane, very narrow shoulder	1.79	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	>10	5.00	<1	1.00
Access density (per km)	<1	1.00	<1	1.00
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

Feature	Section 1	
	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.13. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.21. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for the length of Mountain Road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 40km/h on Mountain Road between Scenic Drive and 50m east of Scenic Drive
- 40 km/h on Mountain Road between 50m east of Scenic Drive and 1,860m east of Turanga Road
- 60 km/h on Mountain Road between 1,860m east of Turanga Road and Opanuku Road

Mountain Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 70 and 100 km/h speed limits on the road. Engineering up of Mountain Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Mountain Road between Scenic Drive and 1,860m east of Turanga Road due to a multitude of factors. These included the narrow lane widths, (including several sections where there is only a single lane) and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 38 km/h. All these factors contribute to this section of road's 'High' IRR score, making it a high-risk section of road.<sup>2</sup>

A proposed speed limit of 60 km/h was selected for Mountain Road between 1,860m east of Turanga Road and Opanuku Road due to a multitude of factors. These included the tortuous road alignment, high roadside hazards, and low mean operating speed of 50 km/h. All these factors contribute to this section of road's 'High' IRR score, also making it a high-risk section of road.

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Mountain Road in Henderson Valley are not considered to be safe and appropriate speed limits for this road. The proposed safe and appropriate speed limits are 60 km/h (Section 1 and Section 3) and 40 km/h (Section 2), which are aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Napuka Road (Henderson Valley)

The speed limit on Napuka Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Napuka Road connects to Grassmere Road to the south-west and is a no-exit road at the north-eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.51 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Napuka Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,179 vehicles per day (vpd). This level of traffic volume is considered relatively high of a short, rural, no-exit road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Grassmere Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.51
Annual Daily Traffic	1,179

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	20+	1.30
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 2.31. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Napuka Road.*

Napuka Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Napuka Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Napuka Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, severe roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup> A 40 km/h speed limit also matches the proposed speed limit on the adjacent road, which is appropriate given Napuka Road is a short, no-exit road.

After considering all the above factors, the existing speed limit of 50 km/h on Napuka Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Nola Road (Oratia)

The speed limit on Nola Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Nola Road connects to Shaw Road to the south and is a no-exit road at the northern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.2 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Nola Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 39 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Shaw Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.20
Annual Daily Traffic	39

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	5 to <10	2.60
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.24. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Nola Road.*

Nola Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Nola Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Nola Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Nola Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – North Way (Titirangi)**

The speed limit on North Way, Titirangi has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>North Way connects to Scenic Drive to the south and is a no-exit north at the northern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.23 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of North Way were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 283 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Scenic Drive:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.23
Annual Daily Traffic	283

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.57. For rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of North Way.*

North Way is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of North Way was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for North Way due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'Medium' IRR score.

After considering all the above factors, the existing speed limit of 70 km/h on North Way in Titirangi is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit for North Way is 60 km/h, which is lower than the speed limit recommended by the Speed Management Guide (80 km/h). However, this is considered appropriate based on the nature and function of the road and the mean operating speed (20 km/h) supports the reduction. It also matches the proposed speed limit on the adjacent road, which is desirable given the very short length of the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Northfield Road (Waitakere)**

Northfield Road, Waitakere, is divided into two sections as follows: <sup>1</sup>

- Section 1: Northfield Road between Waitakere Road and 35m north of Waitakere Road
- Section 2: Northfield Road between 35m north of Waitakere Road and McEntee Road

These sections were chosen as they currently have different speed limits.

The speed limit on Northfield Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Northfield Road connects to Waitakere Road to the south and McEntee Road to the north. This road provides access to residential properties.	
	This section is approximately 0.04 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.51 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on the road, but no cycle facilities. On-street parking on the unsealed shoulder is provided for in places.	This section is a two-way, two-lane, undivided road. There is a footpath on the road, but no cycle facilities. On-street parking on the unsealed shoulder is provided for in places.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Northfield Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 645 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 645 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 39 km/h.	This section has a mean operating speed of 39 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Waitakere Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Burnham Road:</b> 50 km/h</li> <li>• <b>McEntee Road:</b> 50 km/h</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.04	0.51
Annual Daily Traffic	645	645

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Straight	1.00	Curved	1.80
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	>10	5.00	5 to <10	2.60
Access density (per km)	5 to <10	1.06	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 1.88. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.05. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation =50 km/h for the full length of Northfield Road*

Northfield Road is a self-explaining road as the mean operating speeds (39 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h and 50 km/h speed limits on the road. Engineering up of Northfield Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for the short section of Northfield Road between Waitakere Road and 35m north of Waitakere Road to match the remaining Northfield Road.

No change to the existing speed limit is proposed for the section of Northfield Road between 35m north of Waitakere Road and McEntee Road as the existing speed limit of 50 km/h is already aligned with the recommended safe and appropriate speed.

After considering all the above factors, the existing speed limit of 80 km/h on Northfield Road between Waitakere Road and 35m north of Waitakere Road is not considered to be a safe and appropriate speed limit for this section of road. The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Old Forest Hill Road (Waiatarua)

The speed limit on Old Forest Hill Road, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Old Forest Hill Road is a crescent and connects to Forest Hill Road at the northern and southern ends. This road provides access to rural residential properties.</p> <p>This section is approximately 0.65 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Old Forest Hill Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 17 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Forest Hill Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.65
Annual Daily Traffic	17

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.53. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Old Forest Hill Road.*

Old Forest Hill Road is a self-explaining road as the mean operating speeds (27 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Old Forest Hill Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Old Forest Hill Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 27 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Old Forest Hill Road in Waitatarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed. It also matches the proposed speed limit on the adjacent section of Forest Hill Road, which is considered appropriate given its short length.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Opanuku Road (Henderson Valley)

Opanuku Road, Henderson Valley, is divided into four sections as follows:<sup>1</sup>

- Section 1: Opanuku Road between Mountain Road and 90m south of Mountain Road
- Section 2: Opanuku Road between 90m south of Mountain Road and 550m south of Grassmere Road
- Section 3: Opanuku Road between 550m south of Grassmere Road and 2,420m south of Grassmere
- Section 4: Opanuku Road between 2,420m south of Grassmere Road and the southern end of the road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Opanuku Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Sections 1 and 2

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Opanuku Road connects to Henderson Valley Road and Mountain Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.	
	This section is approximately 0.09 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.57 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Opanuku Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &gt;10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 334 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 334 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

Table 2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Sections 3 and 4

Requirement	Comments	
	Section 3	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Opanuku Road connects to Henderson Valley Road and Mountain Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.	
	This section is approximately 1.87 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.60 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Opanuku Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 177 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1 and 2, further relevant information was sought as summarised in Table 3 below.

Table 3: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3	Section 4
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 50 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 35 km/h.	This section has a mean operating speed of 35 km/h.	This section has a mean operating speed of 27 km/h.	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Mountain Road: 70 km/h (proposed 60 km/h)</li> <li>Henderson Valley Road: 70 km/h (proposed 60 km/h)</li> <li>Grassmere Road: 50 km/h (proposed 40 km/h)</li> </ul>			

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.09	0.57
Annual Daily Traffic	334	334

	Data

Required Information for safety metrics calculations	Section 3	Section 4
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	1.87	1.60
Annual Daily Traffic	177	70

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 4
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Straight	1.00	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	>10	5.00	1 to <2	1.15
Access density (per km)	20+	1.30	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Unsealed	10.00
Road alignment	Tortuous	6.00	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80	Severe	2.80
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.99. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.24. For rural areas this corresponds to an IRR band of **High**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.67. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Opanuku Road.*

Opanuku Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h, 70 km/h and 100 km/h speed limits. Engineering up of Opanuku Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Opanuku Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding / tortuous road alignment, high / severe roadside hazards, and low mean operating speeds. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limits of 50 km/h, 70 km/h and 100 km/h on Opanuku Road in Henderson Valley are not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit and providing a consistent speed limit for the length of the road improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Parker Road (Oratia)

The speed limit on Parker Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Parker Road connects to West Coast Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.
	This section is approximately 2.85 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 1 fatal, 0 serious, 2 minor and 1 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Parker Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Parker Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,101 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 46 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	3
DSI crashes during the period	1
Corridor Length (km)	2.85
Annual Daily Traffic	1,101

- The Collective Risk score is 0.07. For rural areas this corresponds to a Collective Risk band of **Medium**
- The Personal Risk score is 17.46. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 1.80. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than the 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Parker Road.*

Parker Road is a self-explaining road as the mean operating speeds (46 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Parker Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Parker Road due to a multitude of factors. These included the curved road alignment, high roadside hazards, and low mean operating speed of 46 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 4 crashes in the last 5 years including 1 fatal, 0 serious, 2 minor and 1 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on Parker Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Perris Road (Henderson Valley)

The speed limit on Perris Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Perris Road connects to Coulter Road to the south and is a no-exit road. This road provides access to rural residential properties.
	This section is approximately 0.48 km in length. It is classified as a Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Perris Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 62 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Coulter Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.48
Annual Daily Traffic	62

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.28
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.40. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Perris Road.*

Perris Road is a self-explaining road as the mean operating speeds (22 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Perris Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Perris Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 22 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Perris Road in Henderson

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Piha Road (Piha)

Piha Road, Piha, is divided into four sections as follows:<sup>1</sup>

- Section 1: Piha Road between Quinns Road and 300m west of Quinns Road
- Section 2: Piha Road between 300m west of Quinns Road and 50m east of Anawhata Road
- Section 3: Piha Road between 50m east of Anawhata Road and 450m west of Karekare Road
- Section 4: Piha Road between 450m west of Karekare Road and Seaview Road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Piha Road, Piha has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Section 1 and 2

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Piha Road connects to Scenic Drive to the east and to Seaview Road to the west. This road provides access to rural residential properties.	
	This section is approximately 0.3 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 4.58 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 2 crashes between 2016 and 2020: 0 fatal, 0 serious, 0 minor and 2 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 9 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 6 non-injury crashes. This resulted in 0 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Piha Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Piha Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> &lt;1 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,427 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 4,883 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.

(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

Table 2: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2)) – Section 3 and 4

Requirement	Comments	
	Section 3	Section 4
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Piha Road connects to Scenic Drive to the east and to Seaview Road to the west. This road provides access to rural residential properties.	
	This section is approximately 6.3 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 2.47 km in length. It is classified as an Arterial road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 41 crashes between 2016 and 2020: 0 fatal, 3 serious, 11 minor and 27 non-injury crashes. This resulted in 3 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 0 serious, 3 minor and 4 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Piha Road is identified as one of the top 10% DSI saving network sections for New Zealand.	

Requirement	Comments	
	Section 3	Section 4
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Piha Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,312 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 2,126 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1 and 2, further relevant information was sought as summarised in Table 3 and 4below.

Table 3: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.	This section has a mean operating speed of 78 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Scenic Drive:</b> 760 km/h (proposed 60 km/h)</li> <li>• <b>Anawhata Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>La Trobe Track:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Karekare Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Te Ahuahu Road:</b> 50 km/h</li> <li>• <b>Seaview Road:</b> 50 km/h</li> <li>• <b>Pendrell Road:</b> 50 km/h</li> </ul>	

Table 4: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 61 km/h.	This section has a mean operating speed of 47 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Scenic Drive:</b> 760 km/h (proposed 60 km/h)</li> <li>• <b>Anawhata Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>La Trobe Track:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Karekare Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Te Ahuahu Road:</b> 50 km/h</li> <li>• <b>Seaview Road:</b> 50 km/h</li> <li>• <b>Pendrell Road:</b> 50 km/h</li> </ul>	

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	3
DSI crashes during the period	0	0
Corridor Length (km)	0.30	4.58
Annual Daily Traffic	2,427	4,883

Required Information for safety metrics calculations	Data	
	Section 3	Section 4
Crash Analysis Period (years)	5	5
Total injury crashes during period	14	3
DSI crashes during the period	3	0
Corridor Length (km)	6.30	2.47
Annual Daily Traffic	2,312	2,126

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.10. For rural areas this corresponds to a Collective Risk band of **Medium**
  - The Personal Risk score is 11.29. For rural areas this corresponds to a Personal Risk band of **High**
- Section 4
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Curved	1.80
Carriageway width	Medium lane, narrow shoulder	1.45	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural Residential	1.50	Remote Rural	1.00
Intersection density (per km)	2 to <3	1.25	<1	1.00
Access density (per km)	<1	1.00	1 to <2	1.01
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3		Section 4	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.50	Tortuous	6.00
Carriageway width	Medium lane, narrow shoulder	1.45	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Remote Rural	1.00	Rural Town	2.50
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	1 to <2	1.01	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 1.65. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.38. For rural areas this corresponds to an IRR band of **Medium**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.67. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 4
  - The Infrastructure Risk Rating Score is 2.54. For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- Less than 80 km/h (Section 1)
- 80 km/h (Section 2)
- Less than 80 km/h (Section 3)
- 50 km/h (Section 4)

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 60 km/h on Piha Road between Quinns Road and 300m west of Quinns Road
- 80 km/h on Piha Road between 300m west of Quinns Road and 50m east of Anawhata Road
- 60 km/h on Piha Road between 50m east of Anawhata Road and 450m west of Karekare Road
- 50 km/h on Piha Road between 450m west of Karekare Road and Seaview Road

Piha Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 50, 70 and 100 km/h speed limits. Engineering up of Piha Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Section 1 of Piha Road due to a multitude of factors. These included the curved road alignment, moderate roadside hazards, and mean operating speed of 61 km/h. This speed limit also matches the proposed speed limit on the adjacent section of Scenic Drive. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>2</sup>

A proposed speed limit of 80 km/h was selected for Section 2 of Piha Road due to a multitude of factors. These included the curved road alignment, moderate roadside hazards, and relatively high mean operating speed of 78 km/h, which means a lower speed limit is unlikely to be credible to motorists.

A proposed speed limit of 60 km/h was selected for Section 3 of Piha Road due to a multitude of factors. These included the winding road alignment, moderate roadside hazards, and low mean operating speed of 61 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

No change is proposed to the existing 50 km/h speed limit on Section 4 of Piha Road as this speed limit is considered appropriate given the Rural Town nature of the road and the likely presence of a high number of active road users.

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Piha Road in Piha are not considered to be safe and appropriate speed limits for this road. The proposed safe and appropriate speed limits are 60 km/h (Section 1 and 3), 80 km/h (Section 2), and 50 km/h (Section 4), which are aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Quinns Road (Waiatarua)

The speed limit on Quinns Road, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Quinns Road connects to Scenic Drive to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 1.45 km in length. It is classified as a Secondary Collector Road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Quinns Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 25 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 26 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Scenic Drive:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.45
Annual Daily Traffic	25

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.16. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Quinns Road.*

Quinns Road is a self-explaining road as the mean operating speeds (26 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Quinns Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Quinns Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 26 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Quinns Road in Waitarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Raroa Terrace (Oratia)**

The speed limit on Raroa Terrace, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Raroa Terrace connects to West Coast Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.36 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Raroa Terrace were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 618 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 31 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.36
Annual Daily Traffic	618

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### **Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.75. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Raroa Terrace.*

Raroa Terrace is a self-explaining road as the mean operating speeds (31 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Raroa Terrace was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Raroa Terrace due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 31 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Raroa Terrace in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Rimu Road (Oratia)**

The speed limit on Rimu Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rimu Road connects to West Coast Road to the north and is a no-exit road. This road provides access to residential properties.</p> <p>This section is approximately 0.56 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Rimu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 496 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 28 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.56
Annual Daily Traffic	496

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	>20	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.31. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Rimu Road.*

Rimu Road is a self-explaining road as the mean operating speeds (28 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Rimu Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Rimu Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 28 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Rimu Road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Scenic Drive (Titirangi / Waiaatarua / Henderson Valley)**

The speed limit on the section of Scenic Drive, Titirangi / Waiaatarua / Henderson Valley between 60m west of Tawini Road and Te Henga Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Scenic Drive connects to Titirangi Road and Atkinson Road to the south-east and to Scenic Drive North and Te Henga Road to the north-west. This road provides access to rural residential properties.</p> <p>This section is approximately 18.15 km in length. It is classified as a Primary Collector or Arterial road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There is a footpath on sections of the road but there are generally no pedestrian or cycle amenities, and no on-street parking is provided along the road.</p>
(d) crash risk for all road users; and	<p>WK NZTA's Crash Analysis System (CAS) records 66 crashes between 2016 and 2020: 1 fatal, 7 serious, 25 minor and 33 non-injury crashes. This resulted in 8 Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Road Name is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Scenic Drive were determined using a combination of site drive-over footage, on-site information and geomaps information.

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as between 291 and 3,260 vehicles per day (vpd) at various locations along the road. This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	<p>The existing speed limit is:</p> <ul style="list-style-type: none"> <li>• 70 km/h between 60m west of Tawini Road and 120m west of Quinns Road</li> <li>• 100 km/h between 120m west of Quinns Road and 70m north of Brabant Road</li> <li>• 70 km/h between 70m north of Brabant Road and 3,645m southeast of Tawari Road</li> <li>• 100 km/h between 3,645m southeast of Tawari Road and 465m north of Mountain Road</li> <li>• 70 km/h between 465m north of Mountain Road and 3,210m south of Te Henga Road</li> <li>• 100 km/h between 3,210m south of Te Henga Road and Te Henga Road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	This road has a mean operating speed of between 46 to 58 km/h.

Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Scenic Drive (east of a point 60m west of Tawini Road):</b> 50 km/h</li> <li>• <b>Shaw Road (north of Scenic Drive):</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Shaw Road (south of Scenic Drive):</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>North Way:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Quinns Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Piha Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Brabant Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Tawari Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Mountain Road:</b> 100 km/h (proposed 40 km/h)</li> <li>• <b>Te Henga Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Scenic Drive North:</b> 100 km/h (proposed 60 km/h)</li> </ul>
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#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	33
DSI crashes during the period	8
Corridor Length (km)	18.15
Annual Daily Traffic	291 to 3,260

- The Collective Risk score is up to 0.33. For rural areas this corresponds to a Collective Risk band of **High**
- The Personal Risk score is up to 165.12. For rural areas this corresponds to a Personal Risk band of **High**

### **Step 3: Calculate the IRR score**

<b>Feature</b>	<b>Category</b>	<b>Risk Score</b>
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.99. For rural areas this corresponds to an IRR band of **Medium-High**.

### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### **Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for Scenic Drive between 60m west of Tawini Road and Te Henga Road.*

Scenic Drive is a self-explaining road as the mean operating speeds (46 to 58 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 and 100 km/h speed limit. Engineering up of Scenic Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Scenic Drive due to a multitude of factors. These included the curved / winding road alignment, high roadside hazards, and low mean operating speed. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, the crash history from NZTA's CAS database shows 66 crashes in the last 5 years including 1 fatal, 7 serious, 25 minor and 33 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 and 100 km/h on Scenic Drive between 60m west of Tawini Road and Te Henga Road is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Scenic Drive North (Swanson)

Scenic Drive North, Swanson, is divided into three sections as follows: <sup>1</sup>

- Section 1: Scenic Drive North between Te Henga Road and 120m east of Te Henga Road
- Section 2: Scenic Drive North between 120m east of Te Henga Road and 400m east of Awhiorangi Promenade
- Section 3: Scenic Drive North between 400m east of Awhiorangi Promenade and Waitakere Road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Scenic Drive North, Swanson has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Scenic Drive North connects to Swanson Road and Waitakere Road to the north-east and to the Te Henga Road and Scenic Drive to the south-west. This road provides access to rural residential properties.		
	This section is approximately 0.12 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 2.34 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 0.48 km in length. It is classified as an Arterial road under the one network road classification (ONRC).

	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on parts of the road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on parts of the road. There are no cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 2 minor and 3 non-injury crashes. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 1 serious, 1 minor and 5 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Scenic Drive North were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3,824 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3,824 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 3,824 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 50 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 57 km/h.	This section has a mean operating speed of 57 km/h.	This section has a mean operating speed of 57 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Swanson Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Waitakere Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Awhiorangi Promenade:</b> 50 km/h</li> <li>• <b>Rangimarie Road:</b> 50 km/h</li> <li>• <b>Puketaha Road:</b> 50 km/h</li> <li>• <b>Range Road:</b> 50 km/h</li> <li>• <b>Kitewaho Road:</b> 50 km/h</li> <li>• <b>Te Henga Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Scenic Drive:</b> 100 km/h (proposed 60 km/h)</li> </ul>		

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	2	2
DSI crashes during the period	0	0	1
Corridor Length (km)	0.12	2.34	0.48
Annual Daily Traffic	3,824	3,824	3,824

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.42. For rural areas this corresponds to a Collective Risk band of **High**
  - The Personal Risk score is 29.85. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	2.01	Medium lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	2 to <3	1.25
Access density (per km)	1 to <2	1.01	>20	1.30
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3	
	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 2.11. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.26. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for the full length of Scenic Drive North.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Scenic Drive North between Te Henga Road and 120m east of Te Henga Road
- 50 km/h on Scenic Drive North between 120m east of Te Henga Road and 400m east of Awhiorangi Promenade
- 60 km/h on Scenic Drive North between 400m east of Awhiorangi Promenade and Waitakere Road

Scenic Drive North is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds on the sections of road where a speed limit change is proposed, despite the existing 80 and 100 km/h speed limits. Engineering up of Scenic Drive North was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

No change to the existing speed limit of 50 km/h is proposed for Section 2 of Scenic Drive North as the current speed limit is considered appropriate based on the number of rural residential properties and the likely presence of high numbers of active users on the road.

A proposed speed limit of 60 km/h was selected for Section 1 and 3 of Scenic Drive North due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 57 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limits of 80 and 100 km/h on Sections 1 and 3 of Scenic Drive North in Swanson are not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit for these sections is 60 km/h which is aligned with the recommended safe and appropriate speed. This also aligns with the proposed speed limits on the adjacent sections of Scenic Drive and Swanson Road, so provides a more consistent speed limit across the network.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Seibel Road (Henderson Valley)

The speed limit on Seibel Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Seibel Road connects to Vineyard Road to the east and is a no-exit road. This road provides access to rural residential properties.</p> <p>This section is approximately 0.61 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Seibel Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,731 vehicles per day (vpd). However, the actual traffic volume is likely to be significantly lower than this given the road is a minor, no-exit rural road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 33 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Vineyard Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.61
Annual Daily Traffic	2,731

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 1.84. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Seibel Road.*

Seibel Road is a self-explaining road as the mean operating speeds (33 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Seibel Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Seibel Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 33 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road<sup>1</sup>.

After considering all the above factors, the existing speed limit of 70 km/h on Seibel Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Shaw Road (Oratia)

Shaw Road, Oratia, is divided into three sections as follows: <sup>1</sup>

- Section 1: Shaw Road between West Coast Road and 375m south of West Coast Road
- Section 2: Shaw Road between 375m south of West Coast Road and Scenic Drive
- Section 3: Shaw Road between Scenic Drive and the south-eastern end of the road

These sections were chosen based on the existing speed limits on the road. They also create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Shaw Road, Oratia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	<p>Shaw Road connects to West Coast Road to the north and is a no-exit road at the south-eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.38 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p>	<p>This section is approximately 3.32 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p>	<p>This section is approximately 0.3 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p>

	This section is a two-way, two-lane, undivided road. There is a footpath on this section of road but no cycle amenities. On-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath on part of the road but generally there are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 5 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 4 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 6 crashes between 2016 and 2020: 0 fatal, 1 serious, 0 minor and 5 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Shaw Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,328 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1,223 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 1,108 vehicles per day (vpd). This level of traffic volume is considered relatively high given the fact this section is a minor no-exit road.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 50 km/h.	The existing speed limit is 70 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 57 km/h.	This section has a mean operating speed of 49 km/h.	This section has a mean operating speed of 33 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>West Coast Road:</b> 50 km/h</li> <li><b>Nola Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Carter Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Scenic Drive:</b> 70 km/h (proposed 60 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	1	1	0
DSI crashes during the period	0	1	0
Corridor Length (km)	0.38	3.32	0.30
Annual Daily Traffic	1,328	1,223	1,108

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.06. For rural areas this corresponds to a Collective Risk band of **Low-Medium**
  - The Personal Risk score is 13.49. For rural areas this corresponds to a Personal Risk band of **High**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Straight	1.00	Winding	3.50
Carriageway width	Medium lane, wide shoulder	1.00	Medium lane, very narrow shoulder	1.779
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	10 to <20	1.10	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3	
	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40

- Section 1

- The Infrastructure Risk Rating Score is 1.23. For rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 2.18. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for the full length of Shaw Road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on Shaw Road between West Coast Road and 375m south of West Coast Road (Section 1)
- 60 km/h on Shaw Road between 375m south of West Coast Road and the south-eastern end of the road (Sections 2 and 3)

Shaw Road is a self-explaining road as the mean operating speeds are generally below or near the proposed safe and appropriate speeds, despite the existing 50, 70 and 100 km/h speed limits. Engineering up of Shaw Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

It is proposed to maintain the existing speed limit of 50 km/h for Shaw Road between West Coast Road and 375m south of West Coast Road as this is considered appropriate due to the presence of a school on this section of road.

A proposed speed limit of 60 km/h was selected for Shaw Road between 375m south of West Coast Road and the south-eastern end of the road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 33 to 49 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 6 crashes in the last 5 years including 1 serious and 5 non-injury crashes on this section of road.

After considering all the above factors, the existing speed limit of 70 and 100 km/h on Shaw Road between 375m south of West Coast Road and the southern end of the road in Oratia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Steam Hauler Track (Waitakere)

The speed limit on Steam Hauler Track, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Steam Hauler Track connects to Bethells Road to the north-east and is a no-exit road and the south-western end. This road provides access to rural residential properties.
	This section is approximately 1.32 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Road Name were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 98 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 41 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.32
Annual Daily Traffic	98

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.34. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Steam Hauler Track.*

Steam Hauler Track is a self-explaining road as the mean operating speeds (41 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Steam Hauler Track was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Steam Hauler Track due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 41 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Steam Hauler Track in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Steed Road (Waitakere)

The speed limit on Steed Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Steed Road connects to Anzac Valley Road to the north and is a no-exit road at the south end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.93 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Steed Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 30 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Valley Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.93
Annual Daily Traffic	83

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.49. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Steed Road.*

Steed Road is a self-explaining road as the mean operating speeds (30 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Steed Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Steed Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment and low mean operating speed of 30 km/h. All these factors contribute to the road's 'Medium' IRR score.

After considering all the above factors, the existing speed limit of 70 km/h on Steed Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit for Steed Road is 60 km/h, which is lower than the speed limit recommended by the Speed Management Guide (80 km/h). However, this is considered appropriate based on the nature and function of the road and the mean operating speed (30 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Stoney Creek Drive (Waitakere)

The speed limit on Stoney Creek Drive, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stoney Creek Drive connects to Bethells Road to the south and is a no-exit road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 1.61 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Road Name were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 83 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.61
Annual Daily Traffic	83

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.94. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Stoney Creek Drive.*

Stoney Creek Drive is a self-explaining road as the mean operating speeds (37 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Stoney Creek Drive was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Stoney Creek Drive due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment and low mean operating speed of 37 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Stoney Creek Drive in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Sturges Road (Henderson Valley)

Sturges Road, Henderson Valley, is divided into two sections as follows:<sup>1</sup>

- Section 1: Sturges Road between the Urban Traffic Area (Auckland Isthmus) boundary and 595m east of Candia Road
- Section 2: Sturges Road between 595m east of Candia Road and Candia Road.

These sections were chosen to identify sections of road where the existing speed limit is different.

The speed limit on Sturges Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Sturges Road connects to Palomino Drive and Summerland Drive to the east and to Candia Road to the west. This road provides access to rural residential properties.	
	This section is approximately 0.14 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.6 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath along the length of the road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There is a footpath along the length of the road. There are no cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Sturges Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using on-site information and geomaps. The IRR defines Urban Residential as: " <i>Urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 960 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 960 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 100 km/h. However, it is noted this is an oversight in the existing bylaw and existing signage indicates the road has a 70 km/h speed limit.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 46 km/h.	This section has a mean operating speed of 45 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Sturges Road (within the Urban Traffic Area):</b> 50 km/h</li> <li>• <b>Candia Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.14	0.60
Annual Daily Traffic	960	960

- Section 1
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.5	Winding	3.5
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Urban Residential	3.00	Rural Residential	1.50
Intersection density (per km)	<1	1.00	1 to <2	1.15
Access density (per km)	10 to <20	1.10	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.24. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 1.99. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 and 2.2 of the Speed Management Guide is 50 km/h for Section 1 and less than 80 km/h for section 2.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for Sturges Road between the Urban Traffic Area Boundary (Auckland Isthmus) and Candia Road.*

Sturges Road is a self-explaining road as the mean operating speeds (45 to 46 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Sturges Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Sturges Road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 45 to 46

km/h. All these factors contribute to the road's 'Medium' to 'Medium-High' IRR score, making a section of the road a high-risk road<sup>2</sup>.

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Sturges Road in Henderson Valley are not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is generally aligned with the recommended safe and appropriate speed for the road. It is noted that the recommended safe and appropriate speed for a short section is 50 km/h; however, a 60 km/h speed limit for this section is more aligned with the rural appearance of the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Sunnyvale Road (Waitakere / Massey)**

Sunnyvale Road, Waitakere / Massey, is divided into two sections as follows: <sup>1</sup>

- Section 1: Sunnyvale Road between Red Hills Road and 907m south of Red Hills Road
- Section 2: Sunnyvale Road between 907m south of Red Hills Road and Kay Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Sunnyvale Road, Waitakere / Massey has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Sunnyvale Road connects to Red Hills Road to the north and to McEntee Road and Kay Road in the south. This road provides access to rural residential properties.	
	This section is approximately 0.91 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 1.84 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a section of footpath on the western side of the road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 14 crashes between 2016 and 2020: 0 fatal, 1 serious, 5 minor and 8 non-injury crashes. This resulted in 1 Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Sunnyvale Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Sunnyvale Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulders (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulders (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,454 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2,454 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 58 km/h.	This section has a mean operating speed of 58 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Red Hills Road:</b> 80 km/h</li> <li>• <b>Haszard Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Crows Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>Kay Road:</b> 80 km/h (proposed 60 km/h)</li> <li>• <b>McEntee Road:</b> 80 km/h (proposed 60 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	6
DSI crashes during the period	0	1
Corridor Length (km)	0.91	1.84
Annual Daily Traffic	2,454	2,454

- Section 1

- o The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- o The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - o The Collective Risk score is 0.11. For rural areas this corresponds to a Collective Risk band of **Medium**
  - o The Personal Risk score is 12.1. For rural areas this corresponds to a Personal Risk band of **High**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15	1 to <2	1.15
Access density (per km)	>20	1.30	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

- Section 1
  - o The Infrastructure Risk Rating Score is 1.93. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - o The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for the full length of the road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Sunnyvale Road.*

Sunnyvale Road is a self-explaining road as the mean operating speeds (58 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Sunnyvale Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Sunnyvale Road due to a multitude of factors. These included the curved / winding road alignment, high roadside hazards, and low mean operating speed of 58 km/h. All these factors contribute to the road's 'Medium-High' to 'High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 15 crashes in the last 5 years including 0 fatal, 1 serious, 5 minor and 9 non-injury crashes.

After considering all the above factors, the existing speed limit of 80 km/h on Sunnyvale Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Swanson Road (Swanson)

The speed limit on the section of Swanson Road, Swanson, between 45m west of Parklands Avenue and Waitakere Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Swanson Road connects to Great North Road to the east and to Scenic Drive and Waitakere Road to the west. This road provides access to residential properties.</p> <p>This section is approximately 0.2 km in length. It is classified as an Arterial road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There is a footpath on this section of road but there are no cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 minor crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Swanson Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and narrow shoulder (0.5 to 1.0 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,417 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Scenic Drive North:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Waitakere Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Swanson Road (east of a point 45m west of Parklands Avenue):</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.20
Annual Daily Traffic	9,417

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, narrow shoulder	1.45
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25
Access density (per km)	>20	1.30
Traffic volume (vpd)	6,000 to <12,000	2.20

The Infrastructure Risk Rating Score is 1.91. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the section of Swanson Road between 45m west of Parklands Avenue and Waitakere Road.*

This section of Swanson Road is a self-explaining road as the mean operating speeds (59 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Swanson Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for this section of Swanson Road to match the speed limit on the adjacent section of Scenic Drive. A 60 km/h speed limit is considered more appropriate than 50 km/h, given the rural residential nature of the road and the existing operating speeds (59 km/h) do not support a 50 km/h speed limit.

After considering all the above factors, the existing speed limit of 80 km/h on Swanson Road in Swanson is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed. The mean operating speed (59 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tawari Road (Henderson Valley)

The speed limit on Tawari Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tawari Road connects to Scenic Drive to the west and is a no-exit road at the eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.2 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Tawari Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 30 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Scenic Drive:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.20
Annual Daily Traffic	30

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.35. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Tawari Road.*

Tawari Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Tawari Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Tawari Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, winding road alignment, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Tawari Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Te Aute Ridge Road (Waitakere)

Te Aute Ridge Road, Waitakere, is divided into three sections as follows: <sup>1</sup>

- Section 1: Te Aute Ridge Road between the western intersection with Bethells Road and 510m south-east of the western intersection with Bethells Road
- Section 2: Te Aute Ridge Road between 510m south-east of the western intersection with Bethells Road and 2,965m south-east of the western intersection with Bethells Road
- Section 3: Te Aute Ridge Road between 2,965m south-east of the western intersection with Bethells Road and the eastern intersection with Bethells Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Te Aute Ridge Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Te Aute Ridge Road is a crescent that connects to Bethells Road at its eastern and western ends. This road provides access to rural residential properties.		
	This section is approximately 0.51 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 2.45 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).	This section is approximately 0.85 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).

Requirement	Comments		
	Section 1	Section 2	Section 3
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Te Aute Ridge Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 64 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 50 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 20 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 36 km/h.	This section has a mean operating speed of 31 km/h.	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Kokako Grove:</b> 100 km/h (proposed 40 km/h)</li> </ul>		

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	0.51	2.45	0.85
Annual Daily Traffic	64	50	20

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Unsealed	10.00
Road alignment	Winding	3.50	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25	<1	1.00
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

Feature	Section 3	
	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.01. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.58. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.97. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for all sections of the road.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h on Te Aute Road between the western intersection with Bethells Road and 510m south-east of the western intersection with Bethells Road
- 40 km/h on Te Aute Road between 510m south of the western intersection with Bethells Road and 2,965m south-east of the western intersection with Bethells Road
- 60 km/h on Te Aute Road between 2,965m south-east of the western intersection with Bethells Road and the eastern intersection with Bethells Road

Te Aute Ridge Road is a self-explaining road as the mean operating speeds (27 to 42 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Te Aute Ridge Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for both ends of Te Aute Ridge Road (Section 1 and 3) due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup> The 60 km/h speed limit also matches the proposed speed limit on the adjacent road so provides better speed limit consistency across the network.

A proposed speed limit of 40 km/h was selected for Te Aute Ridge Road between 510m south-east of the western intersection with Bethells Road and 2,965m south-east of the western intersection with Bethells Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 31 km/h.

After considering all the above factors, the existing speed limit of 100 km/h on Te Aute Ridge Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h (Section 2) and 60 km/h (Section 1 and 3) which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Te Henga Road (Waitakere)

Te Henga Road, Waitakere, is divided into three sections as follows:<sup>1</sup>

- Section 1: Te Henga Road between Scenic Drive and 260m west of Unity Road.
- Section 2: Te Henga Road between 260m west of Unity Road and 335m north of Falls Road.
- Section 3: Te Henga Road between 335m north of Falls Road and Bethells Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Te Henga Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Te Henga Road connects to Scenic Drive to the south and Bethells Road to the north. This road provides access to rural residential properties.		
	This section is approximately 1.17 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 0.66 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).	This section is approximately 2.03 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).

	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 4 non-injury crashes between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there were zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Te Henga Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 2 to &lt;3 intersection per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,011 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,011 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,011 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2	Section 3
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 70 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 50 km/h.	This section has a mean operating speed of 54 km/h.	This section has a mean operating speed of 59 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Scenic Drive:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Scenic Drive North:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Unity Road:</b> 100 km/h (proposed 40 km/h)</li> <li><b>Falls Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Aio Wira Road:</b> 70 km/h (proposed 40 km/h)</li> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>		

#### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	0	0	0
DSI crashes during the period	0	0	0
Corridor Length (km)	1.17	0.66	2.03
Annual Daily Traffic	1,011	1,011	1,011

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Winding	3.50	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	<1	1.00	2 to <3	1.25
Access density (per km)	2 to <5	1.03	10 to <20	1.10
Traffic volume (vpd)	1,000 to <6,000	1.40	1,000 to <6,000	1.40

Feature	Section 3	
	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Remote Rural	1.00
Intersection density (per km)	<1	1.00
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	1,000 to <6,000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is 2.06. For rural areas this corresponds to an IRR band of **High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.18. For rural areas this corresponds to an IRR band of **High**.
- Section 3
  - The Infrastructure Risk Rating Score is 1.39. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h for Section 1 and 2, and 80 km/h for Section 3.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Te Henga Road.*

Te Henga Road is a self-explaining road as the mean operating speeds (50 to 59 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 and 100 km/h speed limits. Engineering up of Te Henga Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Te Henga Road due to a multitude of factors. These included the curved / winding road alignment, moderate / high roadside hazards, and low mean operating speed of 50 to 59 km/h. All these factors contribute to the road's 'Medium' to 'High' IRR score, making it a high-risk road.<sup>2</sup>

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Te Henga Road in Waitakere are not considered to be safe and appropriate speed limits for this road. The proposed safe and appropriate speed limit is 60 km/h which is generally aligned with the recommended safe and appropriate speed.

For the section of Te Henga Road between 335m north of Falls Road and Bethells Road the proposed safe and appropriate speed limit is lower than the speed limit recommended by the Speed Management Guide (80 km/h); however, this is considered appropriate based on the nature and function of the road and the mean operating speed (59 km/h) supports the reduction. It also provides a consistent speed limit along the road.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Township Road (Waitakere)

The speed limit on Township Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Township Road connects to Waitakere Road to the south and is a no-exit road. This road provides access to residential properties as well as the Waitakere Train Station.
	This section is approximately 0.41 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are footpaths provided on both sides of the road and on-street parking is provided for on the road. There are no cycle amenities along this section of road.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Township Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulders (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present"
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1079 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is: <ul style="list-style-type: none"> <li>70 km/h between Waitakere Road and 30m north of Waitakere Road.</li> <li>50 km/h between 30m north of Waitakere Road and the northern end of the road</li> </ul>
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 27 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Waitakere Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>McEntee Road:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.41
Annual Daily Traffic	1,079

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural towns	2.50
Intersection density (per km)	5 to <10	2.60
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	1,000 to <6,000	1.40

The Infrastructure Risk Rating Score is 1.96. For rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 50 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 50 km/h for the full length of Township Road.*

Township Road is a self-explaining road as the mean operating speeds (27 km/h) are below or near the proposed safe and appropriate speeds. Engineering up of Township Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 50 km/h was selected for Township Road to provide a consistent speed limit along the full length of the road given most of the road already has a 50 km/h speed limit. The low mean operating speed of 27 km/h supports this speed limit.

After considering all the above factors, the existing speed limit of 70 km/h for the short 30m section of Township Road between Waitakere Road and 30m north of Waitakere Road is not considered to be a safe and appropriate speed limit for this road or in alignment with the Speed Limit Rule. The proposed safe and appropriate speed limit is 50 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tui Crescent (Waiatarua)

The speed limit on Tui Crescent, Waiatarua has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tui Crescent connects to West Coast Road to the south and is a no-exit road at the northern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.29 km in length. It is classified as a Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Tui Crescent were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: <i>"Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 150 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>West Coast Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.29
Annual Daily Traffic	150

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.19. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Tui Crescent.*

Tui Crescent is a self-explaining road as the mean operating speeds (23 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Tui Crescent was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Tui Crescent due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 23 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Tui Crescent in Waiatarua is not considered to be a safe and appropriate speed limit for this road. The proposed safe and

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Turanga Road (Henderson Valley)

The speed limit on Turanga Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Turanga Road connects to Mountain Road to the south and is a no-exit road at the northern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.76 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Turanga Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 592 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 23 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mountain Road:</b> 70 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.76
Annual Daily Traffic	592

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.99. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Turanga Road.*

Turanga Road is a self-explaining road as the mean operating speeds (23 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Turanga Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Turanga Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, winding road alignment, high roadside hazards, and low mean operating speed of 23 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 70 km/h on Turanga Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Tyndel Road (Waitakere)

The speed limit on Tyndel Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tyndel Road connects to Duffy Road to the east and is a no-exit road to the west. This road provides access to rural residential properties.</p> <p>This section is approximately 0.05 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Tyndel Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 60 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Duffy Road:</b> 80 km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.05
Annual Daily Traffic	60

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Straight	1.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	5 to <10	2.60
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.81. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Tyndel Road.*

Tyndel Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Tyndel Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Tyndel Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, high roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 80 km/h on Tyndel Road in Waitakere

is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Unity Road (Waitakere)

The speed limit on Unity Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Unity Road connects to Te Henga Road to the south and is a no-exit road to the north. This road provides access to rural residential properties.</p> <p>This section is approximately 0.4 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Unity Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 707 vehicles per day (vpd). This traffic volume is significantly higher than what would be expected on a short, rural, no-exit road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Te Henga Road:</b> 100 km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.40
Annual Daily Traffic	707

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Unity Road.*

Unity Road is a self-explaining road as the mean operating speeds (42 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Unity Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Unity Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment and high roadside hazards. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Unity Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Vineyard Road (Henderson Valley)

The speed limit on Vineyard Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Vineyard Road connects to Coulter Road to the north and Candia Road to the south. This road provides access to rural residential properties.
	This section is approximately 1.57 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 1 non-injury crash between 2016 and 2020. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	Vineyard Road is identified as one of the top 10% DSI saving network sections for New Zealand.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Vineyard Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Tortuous</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>

(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 830 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 31 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Candia Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Seibel Road:</b> 70 km/h (proposed 60 km/h)</li> <li><b>Coulter Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

**Step 2: Determine the road safety metrics**

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	1.57
Annual Daily Traffic	830

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.2. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Vineyard Road.*

Vineyard Road is a self-explaining road as the mean operating speeds (31 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Vineyard Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Vineyard Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, tortuous road alignment, high roadside hazards, and low mean operating speed of 31 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road<sup>1</sup>.

After considering all the above factors, the existing speed limit of 70 km/h on Vineyard Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Waikarekare Lane (Karekare)

The speed limit on Waikarekare Lane, Karekare has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Waikarekare Lane connects to Lone Kauri Road to the north and is a no-exit road at the southern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.18 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Waikarekare Lane were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 11 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Lone Kauri Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.18
Annual Daily Traffic	11

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Straight	1.00
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	20+	1.30
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.08. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Waikarekare Lane.*

Waikarekare Lane is a self-explaining road as the mean operating speeds (42 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Waikarekare Lane was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Waikarekare Lane due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, high roadside hazards, and low mean operating speed of 42 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Waikarekare Lane in Karekare is not considered to be a safe and appropriate speed limit for this road. The proposed safe

and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Wairere Road (Waitakere)

The speed limit on Wairere Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Wairere Road connects to Bethells Road to the east and Horsman Road and Jonkers Road to the west. This road provides access to rural residential properties.
	This section is approximately 5.19 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 7 crashes between 2016 and 2020: 0 fatal, 0 serious, 4 minor and 3 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Wairere Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Winding</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information: <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,552 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 80 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 54 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Bethells Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Arrowsmith Road:</b> 80 km/h (proposed 40 km/h)</li> <li><b>Duffy Road:</b> 80 km/h (proposed 60 km/h)</li> <li><b>Gregory Road:</b> 80 km/h (proposed 40 km/h)</li> <li><b>Caton Road:</b> 80 km/h (proposed 40 km/h)</li> <li><b>Mildon Road:</b> 80 km/h (proposed 40 km/h)</li> <li><b>Jonkers Road:</b> 80 km/h (proposed 40 km/h)</li> <li><b>Horsman Road:</b> 80 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	4
DSI crashes during the period	0
Corridor Length (km)	5.19
Annual Daily Traffic	1,552

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Winding	3.50
Carriageway width	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	2 to <5	1.03
Traffic volume (vpd)	1,000 to < 6,000	3.0

The Infrastructure Risk Rating Score is 2.12. For rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Wairere Road.*

Wairere Road is a self-explaining road as the mean operating speeds (54 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 80 km/h speed limit. Engineering up of Wairere Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Wairere Road due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 54 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup> Furthermore, crash history from NZTA's CAS database shows 7 crashes in the last 5 years including 4 minor and 3 non-injury crashes.

After considering all of the above factors, the existing speed limit of 80 km/h on Wairere Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Walker Road (Henderson Valley)

The speed limit on Walker Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Walker Road connects to Mountain Road to the south-west and is a no-exit road and the north-eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.29 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Walker Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to &lt;5 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 33 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 38 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Mountain Road:</b> 100 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.29
Annual Daily Traffic	33

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	3 to <5	1.50
Access density (per km)	5 to <10	1.06
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.24. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Walker Road.*

Walker Road is a self-explaining road as the mean operating speeds (38 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Walker Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Walker Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment, high roadside hazards, and low mean operating speed of 38 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Walker Road in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed

safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Watchmans Road (Karekare)

The speed limit on Watchmans Road, Karekare has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Watchmans Road connects to Karekare Road to the east and is a no-exit road to the west. This road provides access to rural residential properties.</p> <p>This section is approximately 0.25 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Watchmans Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 39 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 20 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Karekare Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.25
Annual Daily Traffic	39

- The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.00
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Severe	2.80
Adjacent land use	Rural Town	2.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 2.46. For urban areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Watchmans Road.*

Watchmans Road is a self-explaining road as the mean operating speeds (20 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit. Engineering up of Watchmans Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Watchmans Road due to a multitude of factors. These included the unsealed road surface, narrow lane widths and very narrow shoulders, curved road alignment, severe roadside hazards, and low mean operating speed of 20 km/h. All these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 50 km/h on Watchmans Road in

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Karekare is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Wendy Road (Waitakere)

The speed limit on Wendy Road, Waitakere has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wendy Road connects to Anzac Valley Road to the north-west and is a no-exit road at the south-eastern end. This road provides access to rural residential properties.</p> <p>This section is approximately 0.92 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for each section of Wendy Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 168 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Valley Road:</b> 70 km/h (proposed 60 km/h)</li> </ul>

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.92
Annual Daily Traffic	168

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70
Road alignment	Curved	1.80
Carriageway width	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	Moderate	1.43
Adjacent land use	Rural Residential	1.50
Intersection density (per km)	1 to <2	1.15
Access density (per km)	10 to <20	1.10
Traffic volume (vpd)	<1,000	1.00

The Infrastructure Risk Rating Score is 1.51. For rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 60 km/h for the full length of Wendy Road.*

Wendy Road is a self-explaining road as the mean operating speeds (22 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 km/h speed limit. Engineering up of Wendy Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 60 km/h was selected for Wendy Road due to a multitude of factors. These included the narrow lane widths and very narrow shoulders, curved road alignment, and low mean operating speed of 22 km/h. All these factors contribute to the road's 'Medium' IRR score.

After considering all the above factors, the existing speed limit of 70 km/h on Wendy Road in Waitakere is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit for Wendy Road is 60 km/h, which is lower than the speed limit recommended by the Speed Management Guide (80 km/h). However, this is considered appropriate based on the nature and function of the road, and the mean operating speed (22 km/h) supports the reduction.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – West Coast Road (Waiatarua)

West Coast Road, Henderson Valley, is divided into two sections as follows:<sup>1</sup>

- Section 1: West Coast Road between 145m east of Shaw Road and 340m west of Shaw Road
- Section 2: West Coast Road between 340m west of Shaw Road and Scenic Drive

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on West Coast Road, Henderson Valley has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	West Coast Road connects to Great North Road to the east and Scenic Drive to the west. This road provides access to rural residential properties.	
	This section is approximately 0.48 km in length. It is classified as an Arterial road under the one network road classification (ONRC).	This section is approximately 5.12 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There is a footpath on this section of road. There are no cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities along most of this section of road, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 59 crashes between 2016 and 2020: 0 fatal, 0 serious, 20 minor and 39 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
	West Coast Road is identified as one of the top 10% DSI saving network sections for New Zealand.	
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of West Coast Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and wide shoulder (&gt;1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "	The adjacent land use is classified as Rural Residential using on-site information and geomaps. The IRR defines Rural Residential as: " <i>Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km</li> <li>• <b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>

(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 6,611 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 1,905 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 50 km/h. There is a 40 km/h variable school speed limit between 145m east of Shaw Road and 285m west of Shaw Road.	The existing speed limit is 70 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 55 km/h.	This section has a mean operating speed of 54 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Carter Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Parker Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Kellys Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Kauri Loop Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Bendalls Lane:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Rimu Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Raroa Terrace:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Bush Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Tui Crescent:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Forest Hill Road:</b> 70 km/h (proposed 60 km/h)</li> <li>• <b>Old Forest Hill Road:</b> 100 km/h (proposed 60 km/h)</li> <li>• <b>Cascade Avenue:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Scenic Drive:</b> 70 km/h (proposed 60 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	20
DSI crashes during the period	0	0
Corridor Length (km)	0.48	5.12
Annual Daily Traffic	6,611	1,905

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Two Lane Undivided	3.70
Road alignment	Curved	1.80	Winding	3.50
Carriageway width	Medium lane, wide shoulder	1.00	Medium lane, very narrow shoulder	1.79
Roadside hazards (in both directions)	Moderate	1.43	High	2.28
Adjacent land use	Rural Residential	1.50	Rural Residential	1.50
Intersection density (per km)	2 to <3	1.25	2 to <3	1.25
Access density (per km)	10 to <20	1.10	5 to <10	1.06

Traffic volume (vpd)	6,000 to <12,000	2.20	1,000 to <6,000	1.40
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- Section 1
  - The Infrastructure Risk Rating Score is 1.72. For rural areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.17. For rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is less than 80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 50 km/h on West Coast Road between 145m east of Shaw Road and 340m west of Shaw Road (with a 40 km/h variable school speed zone between 145m east of Shaw Road and 285m west of Shaw Road)
- 60 km/h on West Coast Road between 340m west of Shaw Road and Scenic Drive

West Coast Road is a self-explaining road as the mean operating speeds (54 and 55 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 and 70 km/h speed limit. Engineering up of West Coast Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

It is proposed to maintain the existing 50 km/h speed limit (with 40 km/h variable school speed zone) on Section 1 as this speed limit is considered appropriate given the presence of a school on the road. A proposed speed limit of 60 km/h was selected for the remainder of West Coast Road (Section 2) due to a multitude of factors. These included the winding road alignment, high roadside hazards, and low mean operating speed of 54 km/h. All these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>2</sup> Furthermore, crash history from NZTA's CAS database shows 59 crashes in the last 5 years including 0 fatal, 0 serious, 20 minor and 39 non-injury crashes.

After considering all the above factors, the existing speed limit of 70 km/h on West Coast Road between 340m west of Shaw Road and Scenic Drive in Henderson Valley is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 60 km/h which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Speed Limit Review – Whatipu Road (Huia)**

Whatipu Road, Huia, is divided into two sections as follows:<sup>1</sup>

- Section 1: Whatipu Road between Huia Road and 950m west of Huia Road
- Section 2: Whatipu Road between 950m west of Huia Road and the western end of the road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Whatipu Road, Huia has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Whatipu Road connects to Huia Road to the east and is a no-exit road to the west. This road provides access to rural residential properties and to Whatipu Beach.	
	This section is approximately 0.95 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 6.07 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cycle amenities, and no on-street parking is provided along this section.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records 4 crashes between 2016 and 2020: 0 fatal, 0 serious, 1 minor and 3 non-injury crashes. Therefore, there are zero Death and Serious Injury (DSI) crashes. This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Whatipu Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Winding</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural Town using on-site information and geomaps. The IRR defines Rural Town as: "Rural town with a mixture of residential and some shops. Some intersections and accesses are present. Some pedestrian and cyclist activity may also be present."	The adjacent land use is classified as Remote Rural using on-site information and geomaps. The IRR defines Remote Rural as: "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km</li> <li>• <b>Access density:</b> 10 to &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 517 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.	Average daily traffic (ADT) was determined from MegaMaps as 175 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	There are no planned modifications currently.	

(j) the views of interested persons and groups.	Potential changes to the speed limit in this area will be presented to the Local Board via email in October/November. Responses will be considered for investigation.
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In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	Section 1	Section 2
Current speed limit	The existing speed limit is 70 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This section has a mean operating speed of 29 km/h.	This section has a mean operating speed of 25 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Huia Road:</b> 70 km/h (proposed 40 km/h)</li> <li>• <b>Mount Donald McLean Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	

### Step 2: Determine the road safety metrics

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	1
DSI crashes during the period	0	0
Corridor Length (km)	0.95	6.07
Annual Daily Traffic	517	175

- Section 1
  - The Collective Risk score is 0.00. For urban areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For urban areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Two Lane Undivided	3.70	Unsealed	10.00
Road alignment	Winding	3.50	Tortuous	6.00
Carriageway width	Narrow lane, very narrow shoulder	2.01	Narrow lane, very narrow shoulder	2.01
Roadside hazards (in both directions)	High	2.28	High	2.28
Adjacent land use	Rural Town	2.50	Remote Rural	1.00
Intersection density (per km)	1 to <2	1.15	<1	1.00
Access density (per km)	10 to <20	1.10	<1	1.00
Traffic volume (vpd)	<1,000	1.00	<1,000	1.00

- Section 1
  - The Infrastructure Risk Rating Score is 2.22. For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is 2.48. For rural areas this corresponds to an IRR band of **Medium-High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <50 km/h for Section 1 and <80 km/h for Section 2.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Whatipu Road.*

Whatipu Road is a self-explaining road as the mean operating speeds (25 to 29 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 70 and 100 km/h speed limit. Engineering up of Whatipu Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Whatipu Road due to a multitude of factors. These included the unsealed road surface on most of the road, narrow lane widths and very narrow shoulders,

winding / tortuous road alignment, high roadside hazards, and low mean operating speed. All these factors contribute to the road's 'Medium' to 'Medium-High' IRR score, making it a high-risk road. <sup>2</sup>

After considering all the above factors, the existing speed limits of 70 and 100 km/h on Whatipu Road in Huia is not considered to be a safe and appropriate speed limit for this road. The proposed safe and appropriate speed limit is 40 km/h for the full length of the road which is aligned with the recommended safe and appropriate speed.

Lowering the speed limit improves the credibility of speed limit setting and assists in explaining safe travel speeds better to visiting drivers. The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

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<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Alison Avenue (Takapuna)

The speed limit on Alison Avenue, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Alison Avenue connects to Earnoch Avenue to the north and The Promenade to the south. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>Alison Avenue is classified as an Access road under the one network road classification (ONRC). Alison Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Alison Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0m to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Alison Avenue has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Earnoch Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Promenade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Alison Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Alison Avenue, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Anne Street (Devonport)**

The speed limit on Anne Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Anne Street connects to Clarence Street to the north and Queens Parade to the south. This road provides access to residential properties and is approximately 0.21 km in length.</p> <p>Anne Street is classified as a Secondary Collector road under the one network road classification (ONRC). Anne Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor injury and one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Anne Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 799 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Anne Street has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Clarence Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From on-site information assessment, **Anne Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Anne Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Anzac Street (Takapuna)

The speed limit on Anzac Street, Takapuna between Hurstmere Road and 30m southwest of Hurstmere Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Anzac Street connects to Hurstmere Road to the East and Auburn Street to the West. This road provides access to commercial and industrial properties and is approximately 0.55 km in length.</p> <p>Anzac Street is classified as an Arterial road under the one network road classification (ONRC). Anzac Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 19 crashes between 2016 and 2020: one serious, six minor and 12 non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Anzac Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazard:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines Commercial Big Box as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 10,422 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Anzac Street has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Campbell Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From the desktop information assessment, **Anzac Street** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed Anzac Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Apirana Avenue (Glen Innes)**

The speed limit on Apirana Avenue, Glen Innes between 30m south of Point England Road and 220m north of Omaru Lane has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Apirana Avenue connects to Point England Road to the south and the road ends on Apirana Avenue to the North. This road provides access to commercial properties and is approximately 0.67 km in length.</p> <p>Apirana Avenue is classified as an Arterial road under the one network road classification (ONRC). Apirana Avenue is a two-way, two-lane, undivided road. There are pedestrian amenities and partial on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 28 crashes between 2016 and 2020: four minor and 24 non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Apirana Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li><li>• <b>Roadside hazards:</b> Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as " <i>characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 15,808 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Apirana Avenue has a mean operating speed in the range of 35-39km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Point England Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Omaru Lane:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Taniwha Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Apirana Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.7 For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed Apirana Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Auburn Street (Takapuna)

The speed limit on Auburn Street, Takapuna between 30m south of Killarney Street and Northcroft Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Auburn Street connects to Killarney Street to the north and Burns Avenue to the south. This road provides access to residential, commercial and industrial properties and is approximately 0.47 km in length.</p> <p>Auburn Street is classified as an Arterial road under the one network road classification (ONRC). Auburn Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 11 crashes between 2016 and 2020: 11 non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Auburn Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,185 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Auburn Street has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Como Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Huron Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Killarney Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Lomond Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Northcroft Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Auburn Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Auburn Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Bartley Terrace (Devonport)**

The speed limit on Bartley Terrace, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"><li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li><li>• Infrastructure Risk Rating Manual 2016 (IRR)</li><li>• WK NZTA MegaMaps tool</li><li>• Auckland Transport Vision Zero</li></ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bartley Terrace connects to Clarence Street to the south and Fleet Street to the north. This road provides access to commercial properties and is approximately 0.11 km in length.</p> <p>Bartley Terrace is classified as a Secondary Collector road under the one network road classification (ONRC). Bartley Terrace is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one minor crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bartley Terrace were determined using desktop information assessment.</p> <ul style="list-style-type: none"><li>• <b>Road stereotype:</b> Two lane undivided</li><li>• <b>Road alignment:</b> Straight</li><li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li><li>• <b>Roadside hazards:</b> Moderate</li></ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines Commercial Strip Shopping as <i>"Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present"</i> .
(g) the number of intersections and property accessways; and	<p>From on-site information:</p> <ul style="list-style-type: none"><li>• <b>Intersection density:</b> 10+ intersections per km</li><li>• <b>Access density:</b> 20+ accesses per km</li></ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1704 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Bartley Terrace has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Clarence Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Fleet Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Bartley Terrace** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.5. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bartley Terrace, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Blomfield Spa (Takapuna)**

The speed limit on Blomfield Spa, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Blomfield Spa connects to Gibbons Road to the east and Lake Road to the west. This road provides access to residential properties and is approximately 0.29 km in length.</p> <p>Blomfield Spa is classified as a Secondary Collector road under the one network road classification (ONRC). Blomfield Spa is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Blomfield Spa were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 917 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Blomfield Spa has a mean operating speed in the range of 20-24km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Gibbons Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Blomfield Spa** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0 For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Blomfield Spa, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Bradley Lane (Glen Innes)

The speed limit on Bradley Lane, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Bradley Lane connects to Line Road to the east and the road ends on Bradley Lane to the west. This road provides access to industrial properties and is approximately 0.16 km in length.</p> <p>Bradley Lane is classified as an Access road under the one network road classification (ONRC). Bradley Lane is a one-way, one-lane, undivided road. There are no pedestrian amenities, and there is no on-street parking along this road. There are also no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Bradley Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Industry using MegaMaps tool. The IRR defines Industry as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Bradley Lane has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Line Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Taniwha Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Bradley Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Bradley Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Buchanan Street (Devonport)

The speed limit on Buchanan Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Buchanan Street connects to Rattray Street to the north, Flagstaff Terrace to the west and King Edward Parade to the south. This road provides access to residential properties and is approximately 0.23km in length.</p> <p>Buchanan Street is classified as a Secondary Collector road under the one network road classification (ONRC). Buchanan Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Buchanan Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i> .

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 349 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Buchanan Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Ratray Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Flagstaff Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>King Edward Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Buchanan Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Buchanan Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Burns Avenue (Takapuna)

The speed limit on Burns Avenue, Takapuna between Northcroft Street and 30m north of Bracken Avenue has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Burns Avenue connects to Auburn Street to the north and Byron Avenue to the south. This road provides access to residential properties and is approximately 0.21 km in length.</p> <p>Burns Avenue is classified as an Arterial road under the one network road classification (ONRC). Burns Avenue is a two-lane, undivided road. There are pedestrian amenities with no on-street parking. There are also no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Burns Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,568 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Burns Avenue has a mean operating speed in the range of 30-34km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Byron Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Northcroft Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Burns Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.5 For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed Burns Avenue, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Byron Avenue (Takapuna)**

Byron Avenue, Takapuna is divided into two sections as outlined below: <sup>1</sup>

- Section 1: Byron Avenue between Lake Road and Burns Avenue
- Section 2: Byron Avenue between Burns Avenue and the western end of Byron Avenue

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Byron Avenue, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This road connects to Lake Road to the east and Burns Avenue to the west. This road provides access to commercial and residential properties and is approximately 0.25 km in length.	This road connects to Burns Avenue to the east and the road ends at Byron Avenue to the west. This road provides access to residential properties and is approximately 0.25 km in length.
(c) the function and use of the road; and	This section of Byron Avenue is classified as an Arterial road under the one network road classification (ONRC). Byron Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	This section of Byron Avenue is classified as an Access road under the one network road classification (ONRC). Byron Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one serious and five non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for this section of Byron Avenue were determined using desktop information assessment:	
	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Narrow lane (<3.0m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as <i>"characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."</i>	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<b>Intersection density:</b> 5 to 10 intersections per km <b>Access density:</b> 20+ accesses per km	<b>Intersection density:</b> 3 to 5 intersections per km <b>Access density:</b> 20+ accesses per km
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 636 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road is still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

<b>AT also had regard to</b>
------------------------------

Current speed limit	The existing speed limit is 50 km/h for both sections of Byron Avenue.
MegaMaps Mean Operating Speed (km/h)	Byron Avenue has a mean operating speed in the range of 20-24km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Burns Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Byron Avenue** has the following information:

- Section 1
  - Collective Risk band of **High**, and a Personal Risk band of **High**
  - The Infrastructure Risk Rating Score is 2.2 For urban areas this corresponds to an IRR band of **Medium**.
  - High risk road.<sup>2</sup>
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 1.7 For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h (for both sections).

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Byron Avenue Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Calliope Road (Devonport)

The speed limit on Calliope Road, Devonport between Victoria Road and High Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Calliope Road connects to Victoria Road to the east. This road provides access to residential properties and is approximately 0.09 km in length.</p> <p>Calliope Road is classified as an Arterial road under the one network road classification (ONRC). Calliope Road is a two-way, two-lane, undivided road. There are pedestrian and cyclist amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Calliope Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 10 to 20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 5232 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Calliope Road has a mean operating speed in the range of 35-39 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Calliope Road** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.5. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Calliope Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Campbell Road (Takapuna)

The speed limit on Campbell Road, Takapuna between 30m south of Killarney Street and Anzac Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Campbell Road connects to Killarney Street to the north and Anzac Street to the south. This road provides access to residential properties and is approximately 0.19 km in length.</p> <p>Campbell Road is classified as a Secondary Collector road under the one network road classification (ONRC). Campbell Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Campbell Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,357 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Campbell Road has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Killarney Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Campbell Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.8 For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Campbell Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Clarence Street (Devonport)**

Clarence Street, Devonport, is divided into two sections as follows: <sup>1</sup>

- Section 1: Between Victoria Road and 250m northwest of Victoria Road
- Section 2: Between Calliope Road and 160m southeast of Calliope Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Clarence Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Clarence Street connects to Victoria Road to the east, and Bartley Terrace to the north, and Anne Street to the south, and Wynyard Street to the south. This road provides access to commercial properties and is approximately 0.25 km in length.	Clarence Street Calliope Road to the west This road provides access to residential properties and is approximately 0.16 km in length.
	Clarence Street is classified as a Secondary Collector road under the one network road classification (ONRC). Clarence Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	Clarence Street is classified as an Access road under the one network road classification (ONRC). Clarence Street is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments			
	Section 1	Section 2		
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>			
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Clarence Street were determined using desktop information.</p> <table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul> </td> </tr> </table>		<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>			
(f) adjacent land use; and	<p>The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present".</p>	<p>The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".</p>		
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>			
(h) traffic volume; and	<p>Average daily traffic (ADT) was determined from MegaMaps as 3372 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>	<p>Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.</p>		
(i) any planned modification to the road; and	<p>Modification/Engineering measures for the area are planned, details of the measures are still under investigation.</p>			
(j) the views of interested persons and groups.	<p>Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.</p>			

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Clarence Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Bartley Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Anne Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Wynyard Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Calliope Road:</b> 50 km/h</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Clarence Street** has the following information:

- Section 1
  - Collective Risk band of **Low**, and Personal Risk of **Low**.
  - The Infrastructure Risk Rating Score is 2.5. For urban areas this corresponds to an IRR band of **Medium-High**.
- Section 2
  - Collective Risk band of **Low**, and Personal Risk of **Low**.
  - The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Clarence Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Club Lane (Takapuna)

The speed limit on Club Lane, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Club Lane connects to Blomfield Spa to the South and the road ends at Club Lane to the north. This road provides access to commercial and properties and is approximately 0.10 km in length.</p> <p>Club Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Club Lane is a two-lane, undivided road. There are pedestrian amenities and no public parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one minor crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Club Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 10 to 20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 450 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>This section of Club Lane has a mean operating speed in the range of 20-24 km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Blomfield Spa:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Club Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.1 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Club Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Collins Street (Takapuna)**

The speed limit on Collins Street, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Collins Street connects to The Terrace to the east and the road ends on Collins Street to the west. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Collins Street is classified as an Access road under the one network road classification (ONRC). Collins Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Collins Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Collins Street has a mean operating speed in the range of 20-24km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>The Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Collins Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.0 For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Collins Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Como Street (Takapuna)

The speed limit on Como Street, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Como Street connects to Lake Road to the east and Auburn Street to the west. This road provides access to commercial properties and is approximately 0.24 km in length.</p> <p>Como Street is classified as a Primary Collector road under the one network road classification (ONRC). Como Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Como Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from traffic survey as 1,683 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Como Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Como Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Como Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Delwyn Lane (Glen Innes)**

The speed limit on Delwyn Lane, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructures Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Delwyn Lane connects to Apirana Avenue to the west and the road ends on Delwyn Lane to the east. This road provides access to industrial properties and is approximately 0.06 km in length.</p> <p>Delwyn Lane is classified as an Access road under the one network road classification (ONRC). Delwyn Lane is a two-lane undivided road. There are no pedestrian amenities and there is no on-street parking along this road. There are also no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Delwyn Lane were determined using desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Industry using MegaMaps tool. The IRR defines Industry as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 78 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Delwyn Lane has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Apirana Avenue:</b> 50 km/h (proposed 50 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Delwyn Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Delwyn Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Devon Lane (Devonport)

The speed limit on Devon Lane, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Devon Lane connects to Fleet Street to the north. This road provides access to residential properties and is approximately 0.05 km in length.</p> <p>Devon Lane is classified as a Secondary Collector road under the one network road classification (ONRC). Devon Lane is a one-way, one-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Devon Lane were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2518 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Devon Lane has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Fleet Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Devon Lane** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 1.8. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Devon Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Earnoch Avenue (Takapuna)

The speed limit on Earnoch Avenue, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Earnoch Avenue connects to Hurstmere Road to the west and the road ends at Earnoch Avenue to the east. This road provides access to residential properties and is approximately 0.26 km in length.</p> <p>Earnoch Avenue is classified as an Access road under the one network road classification (ONRC). Earnoch Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Earnoch Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day"
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from traffic survey as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Earnoch Avenue has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Alison Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Earnoch Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**
- The Infrastructure Risk Rating Score is 2.0 For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Earnoch Avenue, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Flagstaff Terrace (Devonport)**

The speed limit on Flagstaff Terrace, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Flagstaff Terrace connects to Victoria Road to the west and Buchanan Street to the east. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Flagstaff Terrace is classified as a Secondary Collector road under the one network road classification (ONRC). Flagstaff Terrace is a one-way, one-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Flagstaff Terrace were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 10 to 20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1400 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Flagstaff Terrace has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Buchanan Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Flagstaff Terrace** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 1.7. For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Flagstaff Terrace, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Fleet Street (Devonport)**

The speed limit on Fleet Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Fleet Street connects to Victoria Road to the east and Bartley Terrace to the west and Devon Lane to the south. This road provides access to commercial properties and is approximately 0.1 km in length.</p> <p>Fleet Street is classified as a Secondary Collector road under the one network road classification (ONRC). Fleet Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Fleet Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 3331 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Fleet Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Devon Lane:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Bartley Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Fleet Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.4. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Fleet Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Garden Terrace (Devonport)

The speed limit on Garden Terrace, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Garden Terrace connects to Kapa Road to the north and to Queens Parade to the south. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Garden Terrace is classified as an Access road under the one network road classification (ONRC). Garden Terrace is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Garden Terrace were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Garden Terrace has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Kapai Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Garden Terrace** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Garden Terrace, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Gibbons Road (Takapuna)

The speed limit on Gibbons Road, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Gibbons Road connects to The Strand to the north and Blomfield Spa to the south. This road provides access to residential properties and is approximately 0.17 km in length.</p> <p>Gibbons Road is classified as a Secondary Collector road under the one network road classification (ONRC). Gibbons Road is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Gibbons Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 600 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Gibbons Road has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Blomfield Spa:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Strand:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Gibbons Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Gibbons Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Huia Street (Devonport)**

The speed limit on Huia Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Huia Street connects to Calliope Road to the north and to Queens Parade to the south. This road provides access to residential properties and is approximately 0.21 km in length.</p> <p>Huia Street is classified as a Secondary Collector road under the one network road classification (ONRC). Huia Street is a one-way, one-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Huia Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> One way</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1438 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Huia Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Calliope Road:</b> 50 km/h</li> <li>• <b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Huia Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 1.6. For urban areas this corresponds to an IRR band of **Low**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Huia Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Huron Street (Takapuna)**

Huron Street, Takapuna is divided into two sections as outlined below:<sup>1</sup>

- Section 1: Huron Street between Lake Road and Auburn Street
- Section 2: Huron Street between Auburn Street and the western end of Huron Street

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Huron Street, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This road connects to Lake Road to the east and Auburn Street to the west. This road provides access to commercial properties and is approximately 0.24 km in length.	This road connects to Auburn Street to the east and the road ends at Huron Street to the west. This road provides access to residential properties and is approximately 0.19 km in length.
(c) the function and use of the road; and (d) crash risk for all road users; and	This section of Huron Street is classified as a Primary Collector road under the one network road classification (ONRC). Huron Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	This section of Huron Street is classified as an Access road under the one network road classification (ONRC). Huron Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for this section of Huron Street were determined using desktop information assessment:	
	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Narrow lane (<3.0m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as <i>"characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."</i>	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."</i>
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<b>Intersection density:</b> 5 to 10 intersections per km <b>Access density:</b> 20+ accesses per km	<b>Intersection density:</b> 3 to 5 intersections per km <b>Access density:</b> 20+ accesses per km
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 2,774 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Huron Street has a mean operating speed in the range of 20-24km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Huron Street** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 1.7 For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h (for both sections).

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Huron Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Hurstmere Road (Takapuna)

The speed limit on Hurstmere Road, Takapuna between 30m south of Brett Avenue and Lake Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Hurstmere Road is connected from Lake Road to the south and the road ends at Hurstmere Road to north. This road provides access to commercial and residential properties and is approximately 0.85 km in length.</p> <p>Hurstmere Road is classified as an Arterial road under the one network road classification (ONRC). Hurstmere Road is a one-way, one-lane, undivided road. There are pedestrian and cycle amenities with no on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 25 crashes between 2016 and 2020: two serious, five minor and 18 non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Hurstmere Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 3 to 5 intersections per km</li> <li><b>Access density:</b> 5 to 10 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 6,871 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Hurstmere Road has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Earnoch Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Killarney Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Promenade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Strand:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Hurstmere Road** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**
- The Infrastructure Risk Rating Score is 1.7 For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Hurstmere Road, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Kapai Road (Devonport)**

The speed limit on Kapai Road, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kapai Road connects to Garden Terrace to the south. This road provides access to residential properties and is approximately 0.06 km in length.</p> <p>Kapai Road is classified as an Access road under the one network road classification (ONRC). Kapai Road is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kapai Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kapai Road has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Garden Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Kapai Road** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kapai Road, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Kerr Street (Devonport)

The speed limit on Kerr Street, Devonport between Victoria Road and Church Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Kerr Street connects to Victoria Road to the west, to St Aubyn Street to the north, to Mays Street to the south, and to Church Street to the east. This road provides access to residential properties and is approximately 0.45 km in length.</p> <p>Kerr Street is classified as an access road under the one network road classification (ONRC). Kerr Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Kerr Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 995 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Kerr Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Mays Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>St Aubyn Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Church Street:</b> 50 km/h</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Kerr Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

#### **Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Kerr Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Killarney Street (Takapuna)

The speed limit on Killarney Street, Takapuna between Hurstmere Road and 30m west of The Promenade has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• WK New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Killarney Street connects to Hurstmere Road to the north-east and the road ends at Killarney Street to the south-west. This road provides access to commercial and residential properties and is approximately 0.17 km in length.</p> <p>Killarney Street is classified as an Arterial road under the one network road classification (ONRC). Killarney Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and 2020: three non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Killarney Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "Characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,744 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Killarney Street has a mean operating speed in the range of 40-44km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li>• <b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>The Promenade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Killarney Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.7 For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed Killarney Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – King Edwards Parade (Devonport)**

The speed limit on King Edwards Parade, Devonport between Victoria Road and Church Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>King Edwards Parade connects to Victoria Road to the west, and to Buchanan Street, Mays Street, Church Street to the north. This road provides access to residential properties and is approximately 0.67 km in length.</p> <p>King Edwards Parade is classified as a Primary Collector road under the one network road classification (ONRC). King Edwards Parade is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: three non-injury crashes and three minor injury crashes.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for King Edwards Parade were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as “ <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> ”.

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4404 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of King Edwards Parade has a mean operating speed in the range of 30-34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Buchanan Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Mays Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Church Street:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **King Edwards Parade** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for King Edwards Parade, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lake Road (Takapuna)

The speed limit on Lake Road, Takapuna between Anzac Street and 25m south of Blomfield Spa has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lake Road connects to The Terrace in the north and the road ends at Lake Road to the south. This road provides access to commercial properties and is approximately 0.49 km in length.</p> <p>Lake Road is classified as a Regional road under the one network road classification (ONRC). Lake Road is a two-lane, undivided road. There are pedestrian amenities and no on-street parking along this road. There are also cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records six crashes between 2016 and 2020: one serious, two minor and three non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lake Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as " <i>characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 2 to 5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 7,513 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Lake Road has a mean operating speed in the range of 25-29km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Anzac Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Blomfield Spa:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Como Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Huron Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Northcroft Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Strand:</b> 50 km/h (proposed 30 km/h)</li> <li><b>The Terrace:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Lake Road** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.7. For urban areas this corresponds to an IRR band of **Medium-High**.
- High risk road.<sup>1</sup>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lake Road, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Line Road (Glen Innes)**

Line Road, Glen Innes, is divided into two sections as follows:<sup>1</sup>

- Section 1: Line Road between 230m north of Taniwha Street and Taniwha Street
- Section 2: Line Road between Taniwha Street and Point England Road

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Line Road, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Line Road connects to Taniwha Street to the south and the road ends on Line Road to the north. This road provides access to residential properties and is approximately 0.23 km in length.	Line Road connects to Point England Road to the south and the road ends on Taniwha Street to the north. This road provides access to commercial properties and is approximately 0.35 km in length.
	Line Road is classified as an Arterial road under the one network road classification (ONRC). Line Road is a two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 42 crashes between 2016 and 2020: seven minor and 35 non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(e) the characteristics of the road and roadsides; and	The following characteristics for Line Road were determined using desktop information assessment:	
	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Narrow lane (<3.0m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>"dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."</i>	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as <i>"Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."</i>
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<b>Intersection density:</b> 3 to 5 intersections per km <b>Access density:</b> 20+ accesses per km	<b>Intersection density:</b> 10+ intersections per km <b>Access density:</b> 10 to <20 accesses per km
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8,299 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 8,260 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 50 km/h.	
MegaMaps Mean Operating Speed (km/h)	Line Road has a mean operating speed in the range of 40-44km/h.	Line Road has a mean operating speed in the range of 30-34km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.	
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Bradley Lane:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Maybury Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Point England Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Stratton Lane:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Taniwha Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>	

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Line Road** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**.
  - The Infrastructure Risk Rating Score is 2.1 For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**.
  - The Infrastructure Risk Rating Score is 2.8 For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed Line Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Lomond Street (Takapuna)

The speed limit on Lomond Street, Takapuna between Auburn Street and 30m southwest of Auburn Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Lomond Street connects to Auburn Street to the east and the road ends on Lomond Street to the west. This road provides access to residential properties and is approximately 0.03 km in length.</p> <p>Lomond Street is classified as an Access road under the one network road classification (ONRC). Lomond Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Lomond Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Lomond Street has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Lomond Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.3 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Lomond Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Marine Square (Devonport)

The speed limit on Marine Square, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Marine Square connects to Victoria Road to the north and to Queens Parade to the north. This road provides access to residential properties and is approximately 0.16 km in length.</p> <p>Marine Square is classified as a Primary Collector road under the one network road classification (ONRC). Marine Square is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two minor injury crashes.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Marine Square were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-way</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines Urban Residential as " <i>Large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2323 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Marine Square has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Marine Square** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Marine Square, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Maybury Street (Glen Innes)**

The speed limit on Maybury Street, Glen Innes between Line Road and 60m east of Line Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Maybury Street connects to Line Road to the west and the road ends on Maybury Street to the east. This road provides access to residential properties and is approximately 0.06 km in length.</p> <p>Maybury Street is classified as a Secondary Collector road under the one network road classification (ONRC). Maybury Street is a two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Maybury Street were determined using desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as " <i>dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day.</i> "
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,001 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Maybury Street has a mean operating speed in the range 25-29km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Line Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Maybury Street** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Maybury Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mayfair Place (Glen Innes)

The speed limit on Mayfair Place, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mayfair Place only connects to Taniwha Street to the north. This road provides access to commercial properties and is approximately 0.11 km in length.</p> <p>Mayfair Place is classified as a Secondary Collector road under the one network road classification (ONRC). Mayfair Place is a one-way, one-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 12 crashes between 2016 and 2020: two minor and 10 non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mayfair Place were determined using desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> One-Way</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> &lt;1 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1,040 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Mayfair Place has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Taniwha Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Mayfair Place** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.1. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mayfair Place, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Mays Street (Devonport)

The speed limit on Mays Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Mays Street connects to King Edwards Parade to the south and to Kerr Street to the north. This road provides access to residential properties and is approximately 0.33 km in length.</p> <p>Mays Street is classified as an Access road under the one network road classification (ONRC). Mays Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Mays Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 266 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Mays Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>King Edwards Parade:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Kerr Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Mays Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Mays Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9,556 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Merton Road has a mean operating speed in the range of 40-44km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Apirana Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Line Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Point England Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Merton Road** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.5 For urban areas this corresponds to an IRR band of **Medium-High**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40 km/h as the safe and appropriate speed Merton Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Northcroft Street (Takapuna)

Northcroft Street, Takapuna is divided into two sections as outlined below:

1. Section 1: Northcroft Street between Lake Road and Auburn Street
2. Section 2: Northcroft Street between Auburn Street and the western end of Northcroft Street

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Northcroft Street, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This road connects to Lake Road to the east and Auburn Street to the west. This road provides access to commercial properties and is approximately 0.24 km in length.	This road connects to Auburn Street to the east and the road ends at Northcroft Street to the west. This road provides access to residential properties and is approximately 0.14 km in length.
(c) the function and use of the road; and (d) crash risk for all road users; and	This section of Northcroft Street is classified as a Primary Collector road under the one network road classification (ONRC). Northcroft Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	This section of Northcroft Street is classified as a Secondary Collector under the one network road classification (ONRC). Northcroft Street is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crashe. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for this section of Northcroft Street were determined using desktop information assessment:	

Requirement	Comments	
	Section 1	Section 2
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>	
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>	
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 2,445 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 696 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Northcroft Street has a mean operating speed in the range of 20-24km/h.  Speed calming measures will be installed area wide to achieve a low operating speed.

Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Auburn Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Burns Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>
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### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Northcroft Street** has the following information:

- Section 1
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**
  - The Infrastructure Risk Rating Score is 2.0 For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h (for both sections).

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Northcroft Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Omaru Lane (Glen Innes)

The speed limit on Omaru Lane, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Omaru Lane connects to Taniwha Street to the south and Apirana Avenue to the west. This road provides access to commercial and industrial properties and is approximately 0.25 km in length.</p> <p>Omaru Lane is classified as an Access road under the one network road classification (ONRC). Omaru Lane is a two-lane undivided road. There are no pedestrian amenities and cyclist amenities along this road. On-street parking is available on one side.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records four crashes between 2016 and 2020: four non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Omaru Lane were determined using desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines Commercial Big Box as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 104 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Omaru Lane has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Apirana Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Taniwha Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Omaru Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Omaru Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Point England Road (Glen Innes)**

Point England Road, Glen Innes, is divided into two sections as follows:<sup>1</sup>

- Section 1: Point England Road between Elstree Ave and the eastern end of Point England Rd
- Section 2: Point England Road between Apirana Ave and 100m east of Apirana Ave

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Point England Road, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Point England Road connects to Elstree Avenue to the west and the road ends on Point England Road to the east. This road provides access to residential properties and is approximately 0.5 km in length.	Point England Road connects to Apirana Avenue to the west and the road ends on Point England Road to the east. This road provides access to residential properties and is approximately 0.1 km in length.
	This section is classified as a Primary Collector road under the one network road classification (ONRC). Point England Road is a two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.	This section is classified as an Arterial road under the one network road classification (ONRC). Point England Road is a two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records eight crashes between 2016 and 2020: two serious, four minor	WK NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: one minor and one non-

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments					
	Section 1	Section 2				
	and two non-injury crashes. This resulted in two Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.				
(e) the characteristics of the road and roadsides; and	The following characteristics for Point England Road were determined using desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>					
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as “dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”					
(g) the number of intersections and property accessways; and	From desktop information assessment: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>Intersection density:</b> 3 to 5 intersections per km</td> <td style="width: 50%;"><b>Intersection density:</b> 10+ intersections per km</td> </tr> <tr> <td><b>Access density:</b> 20+ accesses per km</td> <td><b>Access density:</b> 20+ accesses per km</td> </tr> </table>		<b>Intersection density:</b> 3 to 5 intersections per km	<b>Intersection density:</b> 10+ intersections per km	<b>Access density:</b> 20+ accesses per km	<b>Access density:</b> 20+ accesses per km
<b>Intersection density:</b> 3 to 5 intersections per km	<b>Intersection density:</b> 10+ intersections per km					
<b>Access density:</b> 20+ accesses per km	<b>Access density:</b> 20+ accesses per km					
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8,617 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 5,843 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.				
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.					
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.					

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.

MegaMaps Mean Operating Speed (km/h)	Point England Road has a mean operating speed in the range of 25-29km/h.	Point England Road has a mean operating speed in the range of 40-44km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.	
Speed limits on adjoining roads	The existing speed limits on adjoining roads are:	
	<b>Elstree Avenue:</b> 50 km/h <b>Erima Avenue:</b> 50 km/h	<b>Apirana Avenue:</b> 50 km/h (proposed 30 km/h) <b>Line Road:</b> 50 km/h (proposed 30 km/h) <b>Merton Road:</b> 50 km/h (proposed 30 km/h)

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Point England Road** has the following information:

- Section 1
  - Collective Risk band of **High**, and a Personal Risk band of **High**.
  - The Infrastructure Risk Rating Score is 2.2 For urban areas this corresponds to an IRR band of **Medium**.
  - High risk road<sup>2</sup>
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**.
  - The Infrastructure Risk Rating Score is 2.3 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Point England Road, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Queens Parade (Devonport)

The speed limit on Queens Parade, Devonport between Victoria Road and Spring Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Queens Parade connects to Victoria Road to the east, to Marine Square to the south, and to Wynyard Street, Anne Street, Garden Terrace, Huia Street, Spring Street to the north. This road provides access to residential properties and is approximately 0.53 km in length.</p> <p>Queens Parade is classified as a Primary Collector road under the one network road classification (ONRC). Queens Parade is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: one serious, one minor and three non-injury crashes.</p> <p>This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Queens Parade were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Urban Residential as "Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2323 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Queens Parade has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Marine Square:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Wynyard Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Anne Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Garden Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Huia Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Spring Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Queens Parade** has the following information:

- Collective Risk band of **High**, and Personal Risk of **High**.
- The Infrastructure Risk Rating Score is 2.6. For urban areas this corresponds to an IRR band of **Medium-High**.
- High risk road<sup>1</sup>

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Queens Parade, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Rattray Street (Devonport)**

The speed limit on Rattray Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Rattray Street connects to Victoria Road to the west and to Buchanan Street to the south. This road provides access to residential properties and is approximately 0.17 km in length.</p> <p>Rattray Street is classified as a Secondary Collector road under the one network road classification (ONRC). Rattray Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Rattray Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as <i>“dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day”</i> .
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 525 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Rattray Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Victoria Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Buchanan Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Rattray** Street has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.3. For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Rattray Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Sanders Avenue (Takapuna)**

The speed limit on Sanders Avenue, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Sanders Avenue connects to Killarney Street to the north and Anzac Street Road to the south. This road provides access to residential properties and is approximately 0.29 km in length.</p> <p>Sanders Avenue is classified as an Access road under the one network road classification (ONRC). Sanders Avenue is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Sanders Avenue were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow lane (&lt;3.0 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 3 to 5 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 132 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Sanders Avenue has a mean operating speed in the range of 20-24km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Lake Road:</b> 50 km/h</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Sanders Avenue** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 1.7 For urban areas this corresponds to an IRR band of **Low-Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Sanders Avenue, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Spring Street (Devonport)

The speed limit on Spring Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Spring Street connects to Queens Parade to the south. This road provides access to residential properties and is approximately 0.11 km in length.</p> <p>Spring Street is classified as an Access road under the one network road classification (ONRC). Spring Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Spring Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Spring Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Spring Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Spring Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – St Aubyn Street (Devonport)

The speed limit on St Aubyn Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>St Aubyn Street connects to Church Street to the east and to Kerr Street to the south. This road provides access to residential properties and is approximately 0.21 km in length.</p> <p>St Aubyn Street is classified as a Secondary Collector road under the one network road classification (ONRC). St Aubyn Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for St Aubyn Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 286 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of St Aubyn Street has a mean operating speed in the range of 25-29km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Church Street:</b> 50 km/h</li> <li><b>Kerr Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **St Aubyn Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.2. For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for St Aubyn Street, the actual operating speeds from the MegaMaps ranges from 25-29km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Stratton Lane (Glen Innes)

The speed limit on Stratton Lane, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Stratton Lane connects to Line Road to the east and the road ends on Stratton Lane to the west. This road provides access to industrial properties and is approximately 0.13 km in length.</p> <p>Stratton Lane is classified as an Access road under the one network road classification (ONRC). Stratton Lane is a two-lane undivided road. There is on-street parking along this road. There are no cyclist nor pedestrian amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: one non-injury crash. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Stratton Lane were determined using desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Industry using MegaMaps tool. The IRR defines Industry as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 52 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>Stratton Lane has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Line Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Stratton Lane** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for Stratton Lane, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – Taniwha Street (Glen Innes)**

Taniwha Street, Glen Innes, is divided into two sections as follows:<sup>1</sup>

- Section 1: Taniwha Street between Apirana Ave and Line Road
- Section 2: Taniwha Street between Line Road and Heatherbank St

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Taniwha Street, Glen Innes has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	This section connects to Apirana Avenue to the west and Line Road to the east. This road provides access to commercial properties and is approximately 0.23 km in length.	This section connects to Line Road to the west and the road ends on Taniwha Street to the east. This road provides access to residential properties and is approximately 0.27 km in length.
	This section is classified as an Arterial road under the one network road classification (ONRC). Taniwha Street is a divided-traversable road. There are pedestrian amenities and some angled parking. There are no cyclist amenities.	This section is classified as an Arterial road under the one network road classification (ONRC). Taniwha Street is a two-lane undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records 15 crashes between 2016 and 2020: one serious, one minor and 13 non-injury crashes. This resulted in one Death and Serious Injury (DSI). This	

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	data includes crashes for all road users and therefore crash risk for all road users were considered.	
(e) the characteristics of the road and roadsides; and	The following characteristics for Taniwha Street were determined using desktop information assessment:	
	<b>Road stereotype:</b> Divided-traversable <b>Road alignment:</b> Straight <b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (<0.5 m) <b>Roadside hazards (in both directions):</b> Moderate	<b>Road stereotype:</b> Two lane undivided <b>Road alignment:</b> Straight <b>Carriageway width:</b> Wide lane (>3.5m) and very narrow shoulder (<0.5m) <b>Roadside hazards:</b> Moderate
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present."	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	From desktop information assessment:	
	<b>Intersection density:</b> 10+ intersections per km <b>Access density:</b> 10 to 20 accesses per km	<b>Intersection density:</b> 5 to 10 intersections per km <b>Access density:</b> 20+ accesses per km
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 8,583 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 8,690 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.	
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 50 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section of Taniwha Street has a mean operating speed in the range of 35-39 km/h.	This section of Taniwha Street has a mean operating speed in the range of 40-44 km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.	
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Apirana Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Line Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Mayfair Place:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Omaru Lane:</b> 50 km/h (proposed 30 km/h)</li> </ul>	

#### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Taniwha Street** has the following information:

- Section 1
  - Collective Risk band of **High**, and a Personal Risk band of **High**.
  - The Infrastructure Risk Rating Score is 2.9 For urban areas this corresponds to an IRR band of **High**.
  - High risk road<sup>2</sup>
- Section 2
  - Collective Risk band of **Low**, and a Personal Risk band of **Low**.
  - The Infrastructure Risk Rating Score is 2.2 For urban areas this corresponds to an IRR band of **Medium**.

#### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

#### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation for both sections = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed for Taniwha Street, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – The Promenade (Takapuna)**

The speed limit on The Promenade, Takapuna between Killarney Street and the eastern end of The Promenade has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Promenade connects to Killarney Street to the west and the road ends on The Promenade to the east. This road provides access to commercial and residential properties and is approximately 0.30 km in length.</p> <p>The Promenade is classified as a Secondary Collector road under the one network road classification (ONRC). The Promenade is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one serious, two minor and four non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Promenade were determined using MegaMaps tool and desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as " <i>characterised by numerous shops facing the street front with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.</i> "

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 5 to 10 intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 576 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	The Promenade has a mean operating speed in the range of 20-24 km/h. Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Alison Avenue:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Killarney Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Alison Avenue** has the following information:

- Collective Risk band of **High**, and a Personal Risk band of **High**.
- The Infrastructure Risk Rating Score is 2.2 For urban areas this corresponds to an IRR band of **Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for The Promenade, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – The Strand (Takapuna)

The speed limit on The Strand, Takapuna has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Strand connects to Lake Road to the south and Hurstmere Road to the west. This road provides access to commercial and industrial properties and is approximately 0.56 km in length.</p> <p>The Strand is classified as a Primary Collector road under the one network road classification (ONRC). The Strand is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: seven non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Strand were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Big Box using MegaMaps tool. The IRR defines Commercial Big Box as "large (big box) shops and/or industry/factories with intermittent large accessways and intersections leading to large car parking areas. Regular intersections and smaller accesses are also likely to be present. Some pedestrian and cyclist activity may be present."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 10 to 20 accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from Traffic Survey as 3,583 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	<p>The Strand has a mean operating speed in the range of 20-24km/h.</p> <p>Speed calming measures will be installed area wide to achieve a low operating speed.</p>
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Hurstmere Road:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Lake Road:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **The Strand** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.4 For urban areas this corresponds to an IRR band of **Medium-High**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

Proposed safe and appropriate speed limit recommendation = 30 km/h

While the speed management guide suggests 40km/h as the safe and appropriate speed for The Strand, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and

regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## **Speed Limit Review – The Terrace (Takapuna)**

The speed limit on The Terrace, Takapuna 20m south of Killarney Street and Anzac Street has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>The Terrace connects to Killarney Street to the north and Anzac Street Road to the south. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>The Terrace is classified as a Secondary Collector road under the one network road classification (ONRC). The Terrace is a two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crashes between 2016 and 2020: one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for The Terrace were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Wide lane (&gt;3.5 m) and very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "urban residential area dominated by housing with frequent driveways and on-street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity is also likely to be present, particularly at certain times of the day."
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 696 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	The Terrace has a mean operating speed in the range of 30-34km/h.
	Speed calming measures will be installed area wide to achieve a low operating speed.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Anzac Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Collins Street:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Killarney Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **The Terrace** has the following information:

- Collective Risk band of **Low**, and a Personal Risk band of **Low**.
- The Infrastructure Risk Rating Score is 2.2 For urban areas this corresponds to an IRR band of **Medium**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 30 km/h*

While the speed management guide suggests 40 km/h as the safe and appropriate speed The Terrace, engineering measures are proposed to be implemented with the intention of achieving an operating speed of less than 33 km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Tudor Street (Devonport)

The speed limit on Tudor Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tudor Street connects to Church Street to the east. This road provides access to residential properties and is approximately 0.13 km in length.</p> <p>Tudor Street is classified as an access road under the one network road classification (ONRC). Tudor Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records no crashes between 2016 and 2020.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Tudor Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow lane (&lt;3.0m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Urban Residential using MegaMaps tool. The IRR defines Urban Residential as "dominated by housing with frequent driveways and on street parking. Regular intersections and accesses are present. Pedestrian and cyclist activity are also likely to be present, particularly at certain times of the day".
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to 10 intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 127 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Tudor Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Church Street:</b> 50 km/h</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, **Tudor Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.0. For urban areas this corresponds to an IRR band of **Low-Medium**.

### Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 4: Conclusion

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Tudor Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Victoria Road (Devonport)

The speed limit on Victoria Road, Devonport between 60m north of Calliope Road and the southern end of Victoria Road has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>New Zealand Transport Agency (NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Victoria Road connects to Queens Parade to the south, and Calliope Street, Clarence Street, Fleet Street to the west, and King Edward Parade, Flagstaff Terrace, Rattray Street, Kerr Street to the east. This road provides access to commercial properties and is approximately 0.54 km in length.</p> <p>Victoria Road is classified as an Arterial road under the one network road classification (ONRC). Victoria Road is a two-way, two-lane, undivided road. There is pedestrian and cyclist amenities and on-street parking along this road.</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records 20 crashes between 2016 and 2020: one serious, six minor and 13 non-injury crashes. This resulted in one Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p> <p>Victoria Road is identified as one of the top 10% DSI saving network sections for New Zealand.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Victoria Road were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Wide lane (&gt;3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as "Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements

Requirement	Comments
	<i>to and from the road. Regular intersections and accesses will also be present."</i>
(g) the number of intersections and property accessways; and	<p>From desktop information assessment:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> 10+ intersections per km</li> <li><b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 9864 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Victoria Road has a mean operating speed in the range of 25-29 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Calliope Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Clarence Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Fleet Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>King Edward Parade:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Flagstaff Terrace:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Rattray Street:</b> 50 km/h (proposed 30 km/h)</li> <li><b>Kerr Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

From desktop information assessment, Victoria Road has the following information:

- Collective Risk band of **High**, and Personal Risk of **High**.
- The Infrastructure Risk Rating Score is 3.0. For urban areas this corresponds to an IRR band of **High**.
- High risk road<sup>1</sup>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

**Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 30 km/h.

**Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

We have determined 30km/h to be safer and more appropriate and align with the recommended speed by the Speed Management Guide. This will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

**Speed Limit Review – Wynyard Street (Devonport)**

The speed limit on Wynyard Street, Devonport has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Wynyard Street connects to Queens Parade to the south and Clarence Street to the north. This road provides access to residential properties and is approximately 0.18 km in length.</p> <p>Wynyard Street is classified as a Primary Collector road under the one network road classification (ONRC). Wynyard Street is a two-way, two-lane, undivided road. There is pedestrian amenities and on-street parking along this road. There are no cyclist amenities</p>
(d) crash risk for all road users; and	<p>NZTA's Crash Analysis System (CAS) records two crashes between 2016 and 2020: two non-injury crashes.</p> <p>This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.</p>
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for Wynyard Street were determined using desktop information assessment.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Medium lane (3.0 to 3.5m) and very narrow shoulder (&lt;0.5m)</li> <li><b>Roadside hazards:</b> Moderate</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Commercial Strip Shopping using MegaMaps tool. The IRR defines Commercial Strip Shopping as " <i>Characterised by numerous shops facing the streetfront with high levels of activity, particularly pedestrians, cyclists and high occupancy on-street parking resulting in many vehicle movements to and from the road. Regular intersections and accesses will also be present.</i> ".

Requirement	Comments
(g) the number of intersections and property accessways; and	From desktop information assessment: <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 10+ intersections per km</li> <li>• <b>Access density:</b> 20+ accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 1261 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road and traffic survey.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures are still under investigation.
(j) the views of interested persons and groups.	Potential changes to a speed limit of 30km/h in this area were presented to the Local Board meeting on 10/08/21. Responses were received and considered for investigation. The local board was generally supportive of the speed limit changes.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Wynyard Street has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Queens Parade:</b> 50 km/h (proposed 30 km/h)</li> <li>• <b>Clarence Street:</b> 50 km/h (proposed 30 km/h)</li> </ul>

### **Step 2: Determine the road safety metrics and IRR score**

From desktop information assessment, **Wynyard Street** has the following information:

- Collective Risk band of **Low**, and Personal Risk of **Low**.
- The Infrastructure Risk Rating Score is 2.6. For urban areas this corresponds to an IRR band of **Medium-High**.

### **Step 3: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### **Step 4: Conclusion**

*Proposed safe and appropriate speed limit recommendation: 30km/h*

While the speed management guide suggests 40km/h as the safe and appropriate speed for Wynyard Street, the actual operating speeds from the MegaMaps ranges from 20-24km/h.

Therefore, we have determined 30km/h to be safer and more appropriate as it will be consistent with the expected operating speed of the road and will have better strategic alignment with national and regional goals including Vision Zero safety outcomes and supporting mode shift to active transport modes for local trips.

## Speed Limit Review – Evans Road (South Head)

The speed limit on Evans Road, South Head has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Evans Road connects to South Head Road to the north. This road provides access to residential properties.</p> <p>This road is approximately 4.15 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This road is a two-way, two-lane, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics of Evans Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Winding.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Severe.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 23 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 8 September 2021. The proposed speed limit reduction from 100km/h to 80km/h for South Head Road was discussed as well as the speed limit on the side roads being reduced to either 60km/h or 40km/h based on the speed limit review. The Local Board was supportive of the proposed speed limit changes being taken to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	Evans Road has a mean operating speed in the range of 30-34 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>South Head Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	4.15
Annual Daily Traffic	23

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**

## Speed Limit Review – Green Road (Parakai)

The speed limit on Green Road, Parakai has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Green Road connects to South Head Road, and Parkhurst Road to the west. This road provides access to residential properties.
	This road is approximately 0.82 km in length. It is classified as an Access road under the one network road classification (ONRC).
(c) the function and use of the road; and	This road is a two-way, two-lane, unsealed undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one minor injury crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics of Green Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Straight</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage and geomaps information.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Winding	3.5
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Severe	2.80
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	5 to <10	1.06
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **2.50**. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Evans Road.

Evans Road is a self-explaining road as the mean operating speeds (35 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Evans Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Evans Road due to a multitude of factors. These being the unsealed road surface, narrow lane and shoulder width, winding nature of the road, severe road-side hazards and low mean operating speed (<40 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all of the above factors, the existing speed limit of 100 km/h on Evans Road in South Head, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

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Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 169 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 8 September 2021. The proposed speed limit reduction from 100km/h to 80km/h for South Head Road was discussed as well as the speed limit on the side roads being reduced to either 60km/h or 40km/h based on the speed limit review. The Local Board was supportive of the proposed speed limit changes being taken to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	Green Road has a mean operating speed in the range of 35-39 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>South Head Road:</b> 100 km/h (proposed to be lowered at 80 km/h, discussed separately).</li> <li>• <b>Parkhurst Road:</b> 100 km/h (proposed to be lowered at 80 km/h, discussed separately).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	1
DSI crashes during the period	0
Corridor Length (km)	0.82
Annual Daily Traffic	169

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **1.90**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation= 40 km/h for the full length of Green Road.*

Green Road is a self-explaining road as the mean operating speeds (35 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Green Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Green Road due to a multitude of factors. These being the unsealed road surface, narrow lane and very narrow shoulder width, straight nature of the road, high road-side hazards and low mean operating speed (<40 km/h). All of these factors contribute to the road's 'Medium-High' IRR score, making it a high-risk road.<sup>1</sup>

Crash history from NZTA's CAS database shows one minor crash in the last 5 years.

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

After considering all the above factors, the existing speed limit of 100 km/h on Green Road in Parakai, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Haranui Road (South Head)**

Haranui Road, South Head, is divided into two sections as follows:<sup>1</sup>

1. Section 1: Haranui Road between South Head Road and 717m east of South Head Road.
2. Section 2: Haranui Road between 717m east of South Head Road and eastern end of Haranui Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Haranui Road, South Head has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Haranui Road connects to South Head Road to the west. This road provides access to residential properties and Haranui Marae.	
	This section is approximately 0.72 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 1.07 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, zero serious, one minor	WK NZTA's Crash Analysis System (CAS) records zero crashes for this section of Haranui Road between 2016 and

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	and zero non-injury crashes. This resulted in zero Deaths and Serious Injuries (DSI). This data includes crashes for all road users and therefore the crash risk for all road users was considered.	2020. Therefore, there are no DSI's on this section.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Haranui Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed.</li> <li>• <b>Road alignment:</b> Curved.</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li>• <b>Roadside hazards (in both directions):</b> High.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 140 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	
(i) any planned modification to the road; and	Engineering / modification measures for the area are planned. Details of the measures for this road are still under investigation	
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 8 September 2021. The proposed speed limit reduction from 100km/h to 80km/h for South Head Road	

Requirement	Comments	
	Section 1	Section 2
	was discussed as well as the speed limit on the side roads being reduced to either 60km/h or 40km/h based on the speed limit review. The Local Board suggested that the speed limit on this road should be consistent along its length. The Local Board was supportive of the proposed speed limit changes being taken to public consultation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regards to		
Current speed limit	The existing speed limit is 100 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	Haranui Road has a mean operating speed of 37 km/h.	Haranui Road has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>South Head Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>	

#### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	0	0
Corridor Length (km)	0.72	1.07
Annual Daily Traffic	140	140

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**
- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score	Category	Risk Score
Road stereotype	Two-Lane undivided.	3.7	Unsealed	10.0
Road alignment	Straight	1.0	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3	<1	1.0
Access density (per km)	2 to <5	1.03	2 to <5	1.03
Traffic volume	<1000	1.0	<1000	1.0

- Section 1:
  - The Infrastructure Risk Rating Score is **1.5**. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 2:
  - The Infrastructure Risk Rating Score is **2.1**. For Rural areas this corresponds to an IRR band of **High**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

- Section 1: The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation:*

- 40 km/h Haranui Road between South Head Road and 717m east of South Head Road. (Section 1).
- 40 km/h Haranui Road between 717m east of South Head Road and eastern end of Haranui Road. (Section 2).

Haranui Road is a self-explaining road as the mean operating speeds (37 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Haranui

Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Section 1 of this road due to a multitude of factors. These being the narrow lane width, very narrow shoulder width and high road-side hazards. All of these factors contribute to the section's 'Medium' IRR score.

Crash history from WK NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, one minor and zero non-injury crashes for Section 1 of this road.

A proposed speed limit of 40 km/h was selected for Section 2 of this road due to a multitude of factors. These being the unsealed surface, narrow lane width, very narrow shoulder width, curved nature of this section of road and high road-side hazards. All of these factors contribute to the road's 'High' IRR score, making it a high-risk section of road.<sup>2</sup>

After considering all the above factors and the presence of a marae on this road, the existing speed limit of 100 km/h on Haranui Road in South Head, is not considered to be a safe and appropriate speed limit for both sections of Haranui Road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Kawa Road (Great Barrier Island)

The speed limit on Kawa Road, Great Barrier Island has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Kawa Road connects to Motairehe Road to the north. This road provides access to residential properties and Kawa Marae.
	This road is approximately 2.62 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This road is a two-way, two-lane, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Kawa Road were determined using a combination of site drive-over footage, on-site information and Geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed.</li> <li><b>Road alignment:</b> Tortuous.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Severe.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using MegaMaps tool. The IRR defines Remote Rural as "Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry."
(g) the number of intersections and property accessways; and	From MegaMaps tool/ a combination of site drive-over footage and geomaps information. <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km.</li> <li><b>Access density:</b> 1 to &lt;2 accesses per km.</li> </ul>

Requirement	Comments
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 92 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification / engineering measures for the area are planned. Details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 7 October 2021. Responses were received and considered for investigation. The local board was supportive of the proposed speed limit change to 40km/h being taken to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to.	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	This road has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>Motairehe Road: 100 km/h (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	2.624
Annual Daily Traffic	92

- The Collective Risk score is **0.00**. For rural areas this corresponds to a Collective Risk band of **Low**
- The Personal Risk score is **0.00**. For rural areas this corresponds to a Personal Risk band of **Low**

## Speed Limit Review – Motairehe Road (Great Barrier Island)

Motairehe Road (Great Barrier Island), is divided into two sections as follows:<sup>1</sup>

- Section 1: Motairehe Road between Mabey Road and 2.46 km west of Mabey Road.
- Section 2: Motairehe Road between 2.46 km west of Mabey Road and western end of Motairehe Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Motairehe Road, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> Refer to the Process Summary for further information.	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Motairehe Road connects to Mabey Road and Kawa Road to the east. This road provides access to, a marae, residential properties, playground, community hub, boat ramp and beach.	
	This section is approximately 2.46 km in length. It is classified as an Access road under the one network road classification (ONRC).	This section is approximately 0.39 km in length. It is classified as an Access road under the one network road classification (ONRC).
	This section is a two-way, two-lane, unsealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Motairehe Road is a two-way, two-lane, undivided sealed road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Tortuous	6.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Severe	2.80
Adjacent land use	Remote rural	1.0
Intersection density (per km)	<1	1.00
Access density (per km)	1 to <2	1.01
Traffic volume	<1000	1.00

The Infrastructure Risk Rating Score is **2.48**. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h for the full length of Kawa Road*

Kawa Road is a self-explaining road as the mean operating speeds (42 km/h) are already near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Kawa Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Kawa Road due to a multitude of factors. These being the unsealed road surface, narrow lane and shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speed (<50 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.

After considering all of the above factors, the existing speed limit of 100 km/h on Kawa Road in Great Barrier Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e. tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, zero serious, one minor and zero injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Motairehe Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Unsealed</li> <li>• <b>Road alignment:</b> Tortuous</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li>• <b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Remote rural using MegaMaps tool. The IRR defines Remote Rural as " <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "	The adjacent land use is classified as Remote rural using MegaMaps tool. The IRR defines Remote Rural as " <i>Only occasional accesses and intersections are present. Surrounding land is rural with few houses and almost no industry.</i> "
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km</li> <li>• <b>Access density:</b> 1 to &lt;2 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 72 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 70 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned, details of the measures for this road are still under investigation.	

Requirement	Comments	
	Section 1	Section 2
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 7 October 2021. Responses were received and considered for investigation. The local board was supportive of the proposed speed limit changes to 40km/h for section 1 and 30km/h for section 2 going to public consultation.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 100 km/h.	
MegaMaps Mean Operating Speed (km/h)	This section of Motairehe Road has a mean operating speed of 42 km/h.	This section of Motairehe Road has a mean operating speed of 42 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Mabey Road:</b> 100 km/h.</li> <li>• <b>Kawa Road:</b> 100 km/h (proposed 40 km/h)</li> </ul>	

**Step 2: Determine the road safety metrics and IRR score**

Required Information for safety metrics calculations	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	1	0
DSI crashes during the period	0	0
Corridor Length (km)	2.456	0.386
Annual Daily Traffic	72	70

- Section 1

- The Collective Risk score is **0.00** while the Personal Risk score is **0.00**. For Rural areas this corresponds to a Collective Risk band of **Low** and a Personal Risk band of **Low**.
- Section 2
  - The Collective Risk score is **0.00** while the Personal Risk score is **0.00**. For Rural areas this corresponds to a Collective Risk band of **Low** and a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Section 1		Section 2	
	Category	Risk Score	Category	Risk Score
Road stereotype	Unsealed	10.0	Two-lane undivided	3.7
Road alignment	Tortuous	6.0	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Severe	2.80	Severe	2.80
Adjacent land use	Remote rural	1.0	Remote rural	1.0
Intersection density (per km)	<1	1.00	<1	1.00
Access density (per km)	1 to <2	1.01	2 to <5	1.03
Traffic volume	<1000	1.00	<1000	1.00

- Section 1: The Infrastructure Risk Rating Score is **2.48**. For Rural areas this corresponds to an IRR band of **High**.
- Section 2: The Infrastructure Risk Rating Score is **1.53**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is:

- <80 km/h between Mabey Road and 2.46 km west of Mabey Road.
- <50 km/h between 2.46 km west of Mabey Road and western end of Motairehe Road.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation:*

- 40 km/h between Mabey Road and 2.46 km west of Mabey Road.
- 30 km/h between 2.46 km west of Mabey Road and western end of Motairehe Road.

Motairehe Road is a self-explaining road as the mean operating speeds (42 km/h) are near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Motairehe Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits. Engineering down interventions are required for Section 2 of Motairehe Road in order to lower operating speeds such that it is safe for the new proposed speed limit.

The proposed speed limit of 40 km/h was selected for Section 1 of this road due to a multitude of factors. These being the unsealed road surface, narrow lane and shoulder width, tortuous nature of the road, severe road-side hazards and low mean operating speeds (<50 km/h). All of these factors contribute to this section of Motairehe Road having a 'High' IRR score, making it a high-risk section of road.

A proposed speed limit of 30 km/h was selected for the Section 2 of this road due to a multitude of factors. These being the high presence of vulnerable road users and lack of pedestrian facilities. This includes large events at the marae such as tangihanga, where many people congregate on foot in this area. The marae is also used as community hub with regular pedestrian movement on the road and there is also a playground near to the marae. The sealed surface, curved alignment, narrow lane width, very narrow shoulder width and severe road-side hazards all contribute to the road's 'Medium' IRR score.

Crash history from NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, one minor and zero non-injury crashes.

After considering all of the above factors, the existing speed limit of 100 km/h on Motairehe Road in Great Barrier Island, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h for Section 1 of Motairehe Road and 30 km/h for Section 2 of Motairehe Road, which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Oruarangi Road (Mangere)

Oruarangi Road, Mangere, is divided into three sections as outlined below: <sup>1</sup>

1. Section 1: Oruarangi Road Between Ascot Road and 680 m north of Ruaiti Road.
2. Section 2: Oruarangi Road Between 680m north of Ruaiti Road and 128 m south of Waipouri Road.
3. Section 3: Oruarangi Road Between 128 m south of Waipouri Road and Ihumatao Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Oruarangi Road, Mangere, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments		
	Section 1	Section 2	Section 3
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>		
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.		
(c) the function and use of the road; and	Oruarangi Road connects to Mark Ford Drive, Ascot Road and Montgomerie Road to the north, Ruaiti Road, Waipouri Road, and Landing Drive to the east, Ihumatao Quarry Road to the west, and Ihumatao Road to the south. This road provides access to residential and commercial properties.		
	This section is approximately 1.55 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.68 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.82 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments		
	Section 1	Section 2	Section 3
			road classification (ONRC).
	Oruarangi Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	Oruarangi Road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this section. There are no cyclist amenities.	Oruarangi Road is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seven crashes between 2016 and 2020: one fatal, two serious, zero minor and four non-injury crashes. This resulted in three Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records five crashes between 2016 and 2020: zero fatal, one serious, three minor and one non-injury. This data includes crashes for all road users and therefore crash risk for all road users were considered.	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero fatal, zero serious, zero minor and one non-injury. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Oruarangi Road were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Curved</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Very wide shoulder (&gt;2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Wide shoulder (1.0 to 2.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential

Requirement	Comments		
	Section 1	Section 2	Section 3
	"area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information.		
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 5 to &lt;10 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 5 to &lt;10 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>	<ul style="list-style-type: none"> <li><b>Intersection density:</b> 1 to &lt;2 intersections per km</li> <li><b>Access density:</b> 10 to &lt;20 accesses per km</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,028 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2,033 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 2,033 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Engineering / modification measures for the area are planned. Details of the measures for this road are still under investigation		
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13 October 2021. Responses were received and considered for investigation. The local board was supportive of the proposed speed limit changes to 60km/h for section 1, 40km/h for section 2 and 60km/h for section 3 going to public consultation.		

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to			
Current speed limit	The existing speed limit is 80 km/h.	The existing speed limit is 50 km/h.	The existing speed limit is 100 km/h.
MegaMaps Mean	Oruarangi Road has a mean operating speed of 55 km/h.	Oruarangi Road has a mean operating speed of 49 km/h.	Oruarangi Road has a mean operating speed of 52 km/h.

Operating Speed (km/h)			
Speed limits on adjoining roads	The existing speed limits on adjoining roads are:		
	<ul style="list-style-type: none"> <li><b>Mark Ford Drive:</b> 50 km/h</li> <li><b>Ascot Road:</b> 50 km/h</li> <li><b>Montgomerie Road:</b> 50 km/h</li> </ul>	<ul style="list-style-type: none"> <li><b>Ruaiti Road:</b> 50 km/h (proposed 40 km/h)</li> <li><b>Waipouri Road:</b> 50 km/h (proposed 40 km/h)</li> </ul>	<ul style="list-style-type: none"> <li><b>Ihumatao Quarry Road:</b> 100 km/h (proposed 60 km/h)</li> <li><b>Landing Drive:</b> 50 km/h</li> <li><b>Ihumatao Road:</b> 100 km/h (proposed 60km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data		
	Section 1	Section 2	Section 3
Crash Analysis Period (years)	5	5	5
Total injury crashes during period	3	4	0
DSI crashes during the period	3	1	0
Corridor Length (km)	1.55	0.68	0.82
Annual Daily Traffic	2,028	2,033	2,033

- Section 1
  - The Collective Risk score is **0.38**. For rural areas this corresponds to a Collective Risk band of **High**.
  - The Personal Risk score is **52.32**. For rural areas this corresponds to a Personal Risk band of **High**.
- Section 2
  - The Collective Risk score is **0.33**. For rural areas this corresponds to a Collective Risk band of **High**.
  - The Personal Risk score is **45.37**. For rural areas this corresponds to a Personal Risk band of **High**.
- Section 3
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1.0	Curved	1.8	Straight	1.0
Carriageway width	Medium lane, Wide shoulder	1.0	Medium lane, Very wide shoulder	0.78	Medium lane, Wide shoulder	1.0
Roadside hazards	High	2.28	High	2.28	High	2.28
Adjacent land use	Rural residential	1.5	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	5 to <10	2.6	1 to <2	1.2
Access density (per km)	5 to <10	1.06	10 to <20	1.10	10 to <20	1.10
Traffic volume	1000 to <6000	1.40	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1:
  - The Infrastructure Risk Rating Score is **1.42**. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 2:
  - The Infrastructure Risk Rating Score is **2.21**. For Rural areas this corresponds to an IRR band of **High**.
- Section 3:
  - The Infrastructure Risk Rating Score is **1.43**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

- Section 1:
  - The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.
- Section 2:
  - The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.
- Section 3:
  - The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 50 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation is*

- 60 km/h: Oruarangi Road Between Ascot Road to 680m north of Ruaiti Road. (Section 1).
- 40 km/h: Oruarangi Road Between 680m north of Ruaiti Road to 128 m south of Waipouri Road. (Section 2).
- 60 km/h: Oruarangi Road Between 145 m south of Waipouri Road to end of Ihumatao Road. (Section 3).

Sections 1 and 3 of Oruarangi Road are self-explaining roads as the mean operating speeds (55 and 52 km/h respectively) are below the proposed safe and appropriate speeds, despite the existing 80 and 100 km/h speed limits respectively. Engineering up of both these sections of Oruarangi Road was considered, but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

Section 2 of Oruarangi Road requires engineering down interventions in order to lower the mean operating speeds such that it is suitable to implement the proposed safe and appropriate speed.

A proposed speed limit of 60 km/h was selected for Section 1 of Oruarangi Road due to a multitude of factors. These being the medium lane, high road-side hazards and due to adverse crash history on this section of road. Both the collective and personal risk for this section of road is classified as '**High**' due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>2</sup>

Crash history from NZTA's CAS database shows seven crashes in the last 5 years including one fatal, two serious, zero minor and four non-injury crashes.

A proposed speed limit of 40 km/h was selected for Section 2 of Oruarangi Road due to a multitude of factors. These being the medium lane, high road-side hazards, high presence of vulnerable users and due to adverse crash history on this section of road. All of these factors contribute to the section's '**High**' IRR. Both the collective and personal risk for this section of road is classified as '**High**' due the number of Death and Serious Injury (DSI) crashes, making it a high-risk road.<sup>3</sup>

Crash history from NZTA's CAS database shows five crashes in the last 5 years including zero fatal, one serious, three minor, and one non-injury crashes.

A proposed speed limit of 60 km/h was selected for Section 3 of Oruarangi Road due to a multitude of factors. These being the medium lane, and high road-side hazards.

Crash history from NZTA's CAS database shows one crash in the last 5 years including zero fatal, zero serious, zero minor and one non-injury crashes.

After considering all the above factors, the existing speed limit of 80, 50 and 100 km/h on section 1 ,2 and 3 of Oruarangi Road respectively in Mangere, are not considered to be safe and appropriate speed limits for these sections of road.

The recommended safe and appropriate speed limit for Section 1 and 3 of Oruarangi Road is 60 km/h which is higher than the Speed Management Guide recommendation (50 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (55 and 52 km/h respectively).

The proposed safe and appropriate speed limit for Section 2 of Oruarangi Road is 40 km/h which is aligned with the recommended safe and appropriate speed.

Given that the existing mean operating speed of Section 2 of Oruarangi Road is 49 km/h and higher than the recommended speed limit of 40 km/h, physical interventions are required to engineer down the road environment in order to reduce travel speeds accordingly.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

<sup>2</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Parkhurst Road (Parakai)

Parkhurst Road, Parakai, is divided into two sections as follows:<sup>1</sup>

- Section 1: Parkhurst Road between South Head Road to 722 m south of South Head Road.
- Section 2: Parkhurst Road between 722 m south of South Head Road and 160 m northwest of Springs Road.

These sections were chosen to create homogenous road sections that have consistent features (adjacent land use, access density, nature of the road, etc). Therefore, people can understand the reason for a speed limit change when they move between sections.

The speed limit on Parkhurst Road, Parakai, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments	
	Section 1	Section 2
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>	
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.	
(c) the function and use of the road; and	Parkhurst Road connects to South Head Road and Green Road to the north and adjacent section of Parkhurst Road to the south. This road provides access to residential properties.	
	This section is approximately 0.72 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).	This section is approximately 0.23 km in length. It is classified as a Primary Collector Road under the one network road classification (ONRC).
	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.	This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records three crashes between 2016 and	WK NZTA's Crash Analysis System (CAS) records one crash between 2016 and 2020: zero

<sup>1</sup> It is noted that the ONRC and MegaMaps sections differ from the proposed road sections. This is because AT has chosen to align the proposed speed limit changes with sections of similar road alignment (i.e tortuous vs curved) as specified within the IRR.

Requirement	Comments	
	Section 1	Section 2
	2020: zero fatal, zero serious, zero minor and three non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.	fatal, zero serious, zero minor and one non-injury crashes. This resulted in zero Death and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users were considered.
(e) the characteristics of the road and roadsides; and	The following characteristics for each section of Parkhurst Road were determined using a combination of site drive-over footage, on-site information and geomaps information.	
	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided.</li> <li>• <b>Road alignment:</b> Straight.</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m).</li> <li>• <b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:	
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 1 to &lt;2 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km.</li> <li>• <b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 4,028 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.	Average daily traffic (ADT) was determined from MegaMaps as 4,798 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.

Requirement	Comments	
	Section 1	Section 2
(i) any planned modification to the road; and	There are no planned modifications currently.	
(j) the views of interested persons and groups.	Potential changes to the speed limit on South Head Road (from 100km/h to 80km/h) were discussed with the Local Board via meeting on 8 September 2021. At the same time it was discussed that the side road proposals were for a reduction to 60km/h or 40km/h based on the speed limit review. The changes on Parkhurst Road were not explicitly discussed in this meeting.	

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to		
Current speed limit	The existing speed limit is 100 km/h.	
MegaMaps Mean Operating Speed (km/h)	Parkhurst Road has a mean operating speed of 55 km/h.	Parkhurst Road has a mean operating speed of 49 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>South Head Road: 100 km/h</b> (proposed 80 km/h.).</li> <li>• <b>Green Road: 100 km/h.</b> (proposed 40 km/h).</li> </ul>	

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data	
	Section 1	Section 2
Crash Analysis Period (years)	5	5
Total injury crashes during period	0	0
DSI crashes during the period	0	0
Corridor Length (km)	0.72	0.23
Annual Daily Traffic	4,028	4,798

- Section 1
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

- Section 2
  - The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**
  - The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score	Category	Risk Score
Road stereotype	Two-lane undivided	3.7	Two-lane undivided	3.7
Road alignment	Straight	1.0	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.45	Medium lane, Narrow shoulder	1.45
Roadside hazards	Moderate	1.43	Moderate	1.43
Adjacent land use	Rural residential	1.5	Rural residential	1.5
Intersection density (per km)	1 to <2	1.2	<1	1.0
Access density (per km)	2 to <5	1.03	>20	1.30
Traffic volume	1000 to <6000	1.40	1000 to <6000	1.40

- Section 1
  - The Infrastructure Risk Rating Score is **1.37**. For Rural areas this corresponds to an IRR band of **Medium**.
- Section 2
  - The Infrastructure Risk Rating Score is **1.37**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

Proposed safe and appropriate speed limit recommendation is

- 80 km/h Parkhurst Road (between South Head Road and 722 m south of South Head Road).
- 50 km/h Parkhurst Road (between 722 m south of South Head Road and 160 m northwest of Springs Road).

Section 1 of Parkhurst Road is a self-explaining road as the mean operating speeds (55 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Parkhurst Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for Parkhurst Road due to a multitude of factors. These being the medium lane width, narrow shoulder width and moderate road-side hazards.

Over the past five years four crashes have been recorded, resulting in zero DSIs.

Section 2 of Parkhurst Road is already operating at a safe and appropriate speed limit. Therefore, no changes are required at this 230 m small section of Parkhurst Road.

After considering all the above factors, the existing speed limit of 100 km/h on Parkhurst Road in Parakai, is not considered to be a safe and appropriate speed limit for this section of road.

The recommended safe and appropriate speed limit for section 1 of Parkhurst Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the existing operating speeds (100 km/h).

The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Pukaki Road (Mangere)

The speed limit on:

- Pukaki Road, Mangere, between 1,050 m south of Cyclamen Road and southern end of Pukaki Road

has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>This section of Pukaki Road connects to an adjacent section of Pukaki Road to the north. This road provides access to residential properties and a marae.</p> <p>This section is approximately 0.44 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics of this section of Pukaki Road were determined using a combination of site drive-over footage, on site information and geomaps information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Narrow Lane (3.0 to 3.5 m) and Very narrow shoulder (&lt;0.5m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "Rural area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist

Requirement	Comments
	<i>activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> &lt;1 intersection per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 651 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modifications / engineering measures for the area are planned. Details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13 October 2021. Responses were received and considered for investigation. The Local Board was supportive of the proposed speed limit change to 30km/h going to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 60 km/h.
MegaMaps Mean Operating Speed (km/h)	This section of Pukaki Road has a mean operating speed in the range of 20-24 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Pukaki Road (to the north): 60 km/h</b></li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	<b>0</b>
DSI crashes during the period	0
Corridor Length (km)	0.44
Annual Daily Traffic	651

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.

- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.36**. For Rural areas this corresponds to an IRR band of **Medium**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 30 km/h Pukaki Road between 1,050 m south of Cyclamen Road and the southern end of Pukaki Road.*

Pukaki Road is a self-explaining road as the mean operating speeds are below or near the proposed safe and appropriate speeds, despite the existing 60 km/h speed limit.

A proposed speed limit of 30km/h was selected for Pukaki Road due to a multitude of factors. These being the narrow lane and shoulder width, high road-side hazards, low mean operating speed (<30 km/h) and presence of a marae and associated housing.

After considering all the above factors, the existing speed limit of 60 km/h on Pukaki Road in Mangere, is not considered to be a safe and appropriate speed limit for this section of road.

The proposed safe and appropriate speed limit for Pukaki Road is 30 km/h, which is lower than the speed limit recommended by the Speed Management Guide (40 km/h). However, it is considered appropriate based on the function of the road, presence of the marae and the current mean operating speed based on Megamaps (20 km/h) supports this reduction.

The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## Speed Limit Review – Ruaiti Road (Mangere)

The speed limit on Ruaiti Road, Mangere, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Ruaiti Road connects to Oruarangi Road to the west. This road provides access to a marae and residential properties.
	This road is approximately 0.26 km in length. It is classified as an Access Road under the one network road classification (ONRC).
	This road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics of Ruaiti Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 190 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13 October 2021. Responses were received and considered for investigation. The local board was supportive of proposed speed limit change to 40km/h going to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Ruaiti Road has a mean operating speed of 22 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li><b>Oruarangi Road: 50 km/h</b> (proposed 40 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.26
Annual Daily Traffic	190

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	>20	1.30
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.26**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h Ruaiti Road (Full Length).*

Ruaiti Road is a self-explaining road as the mean operating speeds (22 km/h) are below or near, the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit.

A proposed speed limit of 40 km/h was selected for Ruaiti Road due to a multitude of factors. These being the presence of a marae and associated pedestrian activity, the narrow lane width and very narrow shoulder width, moderate road-side hazards and low mean operating speed (<30 km/h).

After considering all the above factors, the existing speed limit of 50 km/h on Ruaiti Road in Mangere, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.

**Speed Limit Review – South Head Road (South Head)**

The speed limit on:

- South Head Road, South Head, between Green Road and 1,504m north of Tarawera Road

has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

**Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>• Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>• Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>• WK NZTA MegaMaps tool</li> <li>• Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>South Head Road connects to adjacent South Head Road to the northwest, Haranui Road to the north, Evans and Tarawera Road to the southwest and Parkhurst Road to the east. This road provides access to residential properties.</p> <p>This section is approximately 6.25 km in length. It is classified as a Primary Collector road under the one network road classification (ONRC).</p> <p>This section is a two-way, two-lane, undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this section.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records seventeen crashes between 2016 and 2020: zero fatal, two serious, seven minor and eight non-injury crashes. This resulted in two Deaths and Serious Injury (DSI). This data includes crashes for all road users and therefore crash risk for all road users was considered.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics for this section of South Head Road were determined using a combination of site drive-over footage, on-site information and geomatics information.</p> <ul style="list-style-type: none"> <li>• <b>Road stereotype:</b> Two-lane undivided</li> <li>• <b>Road alignment:</b> Straight</li> <li>• <b>Carriageway width:</b> Medium Lane (3.0 to 3.5 m) and Narrow shoulder (0.5 to 1.0 m)</li> <li>• <b>Roadside hazards (in both directions):</b> High</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with

Requirement	Comments
	<i>accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."</i>
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage, on-site information and geomaps information. <ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 10 to &lt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 2,015 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	Modification/Engineering measures for the area are planned. Details of the measures for this road are still under investigation.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 8 September 2021. Responses were received and considered for investigation. The Local Board was supportive of the proposed speed limit change to 80km/h being taken to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed	This section of South Head Road has a mean operating speed of 63 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>Parkhurst Road: 100 km/h</b> (proposed 80 km/h)</li> <li>• <b>Evans Road: 100 km/h</b> (proposed 40 km/h)</li> <li>• <b>Tarwera Road: 100 km/h</b> (proposed 40 km/h)</li> <li>• <b>Haranui Road: 100 km/h</b> (proposed 40 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	9
DSI crashes during the period	2
Corridor Length (km)	6.25

Annual Daily Traffic	2,015
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The Collective Risk score is **6.39** while the Personal Risk score is **8.69**. For, Rural areas this corresponds to a Collective Risk band of **Low-Medium** and a Personal Risk band of **Medium-High**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Medium lane, Narrow shoulder	1.45
Roadside hazards	High	2.28
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	10 to <20	1.1
Traffic volume	1000 to <6000	1.40

The Infrastructure Risk Rating Score is **1.63**. For Rural areas this corresponds to an IRR band of **Medium-High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 80 km/h South Head Road, South Head, between Green Road and 1504m north of Tarawera Road.*

South Head Road is a self-explaining road as the mean operating speeds (63 km/h) are below the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of South Head Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 80 km/h was selected for South Head Road due to a multitude of factors. These being the medium lane width, narrow shoulder width and high road-side hazards. All of these factors contribute to the road's 'High' IRR score. The collective and personal risk of this road are classified as '**Low-Medium**' and '**Medium-High**' respectively due to the number of Deaths and Serious Injury (DSI) crashes, making it a high-risk road.<sup>1</sup>

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

Crash history from WK NZTA's database shows seventeen crashes in the last five years including zero fatal, two serious, seven minor and eight non-injury crashes.

After considering all the above factors, the existing speed limit of 100 km/h on South Head Road in South Head, is not considered to be a safe and appropriate speed limit for this section of road.

The recommended safe and appropriate speed limit for South Head Road is 80 km/h which is higher than the Speed Management Guide recommendation (<80 km/h) but is considered appropriate when considering the nature and function of the road. A lower speed limit is unlikely to be credible or supported by the public due to the 85th percentile surveyed speeds recorded on this road in 2017 (93.5 km/h).

The reduced speed limit will also reduce the potential and severity of crash risk for all road users.

## **Speed Limit Review – Tarawera Road (South Head)**

The speed limit on Tarawera Road, South Head, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached.

### **Step 1: Determine the base information**

*Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))*

<b>Requirement</b>	<b>Comments</b>
(a) the information about speed management developed and maintained by the Agency; and:	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	<p>Tarawera Road connects to South Head Road to the north This road provides access to residential properties.</p> <p>This road is approximately 4.18 km in length. It is classified as an Access road under the one network road classification (ONRC).</p> <p>This road is a two-way, two-lane, unsealed undivided road. There are no pedestrian or cyclist amenities along this road, and there is no on-street parking along this road.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crashes between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	<p>The following characteristics of Tarawera Road were determined using a combination of site drive-over footage, on-site information and geomaps information.</p> <ul style="list-style-type: none"> <li><b>Road stereotype:</b> Unsealed</li> <li><b>Road alignment:</b> Curved</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m)</li> <li><b>Roadside hazards (in both directions):</b> Severe</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."
(g) the number of intersections and property accessways; and	The following were determined using a combination of site drive-over footage and geomaps information:

Requirement	Comments
	<ul style="list-style-type: none"> <li>• <b>Intersection density:</b> 2 to &lt;3 intersections per km.</li> <li>• <b>Access density:</b> 2 to &lt;5 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 31 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications currently.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 8 September 2021. The proposed speed limit reduction from 100km/h to 80km/h for South Head Road was discussed as well as the speed limit on the side roads being reduced to either 60km/h or 40km/h based on the speed limit review. The Local Board was supportive of the proposed speed limit changes being taken to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 100 km/h.
MegaMaps Mean Operating Speed (km/h)	Tarawera Road has a mean operating speed of 37 km/h.
Speed limits on adjoining roads	The existing speed limits on adjoining roads are: <ul style="list-style-type: none"> <li>• <b>South Head Road:</b> 100 km/h (proposed 80 km/h)</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	4.18
Annual Daily Traffic	31

The Collective Risk score is **0.0** while the Personal Risk score is **0.0**. For Rural areas this corresponds to a Collective Risk band of **Low** and a Personal Risk band of **Low**

### Step 3: Calculate the IRR score

Feature	Category	Risk Score
Road stereotype	Unsealed	10.0
Road alignment	Curved	1.8
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Severe	2.80
Adjacent land use	Rural residential	1.5
Intersection density (per km)	2 to <3	1.3
Access density (per km)	2 to <5	1.03
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **2.24**. For Rural areas this corresponds to an IRR band of **High**.

### Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables

The safe and appropriate speed recommended by Table 2.2 of the Speed Management Guide is <80 km/h.

### Step 5: Conclusion

*Proposed safe and appropriate speed limit recommendation = 40 km/h Tarawera Road (Full Length).*

Tarawera Road is a self-explaining road as the mean operating speeds (37 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 100 km/h speed limit. Engineering up of Tarawera Road was considered but dismissed due to the substantial and costly upgrades that would be required. The cost to do this would substantially outweigh any benefits.

A proposed speed limit of 40 km/h was selected for Tarawera Road due to a multitude of factors. These being the unsealed road surface, narrow lane and shoulder width, curved nature of the road, severe road-side hazards and low mean operating speed (<40 km/h). All of these factors contribute to the road's 'High' IRR score, making it a high-risk road.<sup>1</sup>

After considering all the above factors, the existing speed limit of 100 km/h on Tarawera Road in South Head, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users

<sup>1</sup> A road is high risk if either the Personal Risk, Collective Risk, or Infrastructure Risk Rating is Medium-High or High

## Speed Limit Review – Waipouri Road (Mangere)

The speed limit on Waipouri Road, Mangere, has been reviewed in accordance with the Land Transport Rule: Setting of Speed Limits 2017 (Setting of Speed Limits Rule). The review process is outlined in the Process Summary document attached

### Step 1: Determine the base information

Table 1: Setting of Speed Limits Rule Summary of Relevant Requirements (4.2(2))

Requirement	Comments
(a) the information about speed management developed and maintained by the Agency; and	<ul style="list-style-type: none"> <li>Waka Kotahi New Zealand Transport Agency (WK NZTA) Speed Management Guide 2016</li> <li>Infrastructure Risk Rating Manual 2016 (IRR)</li> <li>WK NZTA MegaMaps tool</li> <li>Auckland Transport Vision Zero</li> </ul> <p>Refer to the Process Summary for further information.</p>
(b) any relevant guidance on speed management provided by the Agency; and	The WK NZTA Speed Management Guide was used for the review and consideration of the speed limit.
(c) the function and use of the road; and	Waipouri Road connects to Oruarangi Road to the west. This road provides access to residential properties.
	<p>This road is approximately 0.24 km in length. It is classified as a Secondary Collector road under the one network road classification (ONRC).</p> <p>This road is a two-way, two-lane, undivided road. There are pedestrian amenities and on-street parking along this road. There are no cyclist amenities.</p>
(d) crash risk for all road users; and	WK NZTA's Crash Analysis System (CAS) records zero crash between 2016 and 2020. Therefore, there are no Death and Serious Injury (DSI) crashes.
(e) the characteristics of the road and roadsides; and	The following characteristics for Waipouri Road were determined using a combination of site drive-over footage, on-site information and geomaps information.
	<ul style="list-style-type: none"> <li><b>Road stereotype:</b> Two-lane undivided.</li> <li><b>Road alignment:</b> Straight.</li> <li><b>Carriageway width:</b> Narrow Lane (&lt;3.0 m) and Very narrow shoulder (&lt;0.5 m).</li> <li><b>Roadside hazards (in both directions):</b> Moderate.</li> </ul>
(f) adjacent land use; and	The adjacent land use is classified as Rural residential using MegaMaps tool. The IRR defines Rural residential as "area with accesses present to private dwellings and farms. There may be the occasional industry/factory present. Some pedestrian and cyclist activity may also be present, particularly at certain times of the day, but with few crossing movements."

Requirement	Comments
(g) the number of intersections and property accessways; and	<p>The following were determined using a combination of site drive-over footage, on-site information and geomaps information:</p> <ul style="list-style-type: none"> <li><b>Intersection density:</b> &lt;1 intersection per km.</li> <li><b>Access density:</b> &gt;20 accesses per km.</li> </ul>
(h) traffic volume; and	Average daily traffic (ADT) was determined from MegaMaps as 280 vehicles per day (vpd). This level of traffic volume is consistent with the nature of the road.
(i) any planned modification to the road; and	There are no planned modifications at this time.
(j) the views of interested persons and groups.	Potential changes to the speed limit in this area were presented to the Local Board via meeting on 13 October 2021. Responses were received and considered for investigation. The local board was supportive of the proposed speed limit change to 40km/h going to public consultation.

In addition to the factors outlined in Table 1, further relevant information was sought as summarised in Table 2 below.

Table 2: Additional Relevant Factors

AT also had regard to	
Current speed limit	The existing speed limit is 50 km/h.
MegaMaps Mean Operating Speed (km/h)	Waipouri Road has a mean operating speed of 25 km/h.
Speed limits on adjoining roads	<p>The existing speed limits on adjoining roads are:</p> <ul style="list-style-type: none"> <li><b>Oruarangi Road: 50 km/h</b> (proposed 40 km/h).</li> </ul>

### Step 2: Determine the road safety metrics and IRR score

Required Information for safety metrics calculations	Data
Crash Analysis Period (years)	5
Total injury crashes during period	0
DSI crashes during the period	0
Corridor Length (km)	0.24
Annual Daily Traffic	280

- The Collective Risk score is 0.00. For rural areas this corresponds to a Collective Risk band of **Low**.
- The Personal Risk score is 0.00. For rural areas this corresponds to a Personal Risk band of **Low**.

**Step 3: Calculate the IRR score**

Feature	Category	Risk Score
Road stereotype	Two-lane undivided	3.7
Road alignment	Straight	1.0
Carriageway width	Narrow lane, Very narrow shoulder	2.01
Roadside hazards	Moderate	1.43
Adjacent land use	Rural residential	1.5
Intersection density (per km)	<1	1.0
Access density (per km)	>20	1.30
Traffic volume	<1000	1.0

The Infrastructure Risk Rating Score is **1.26**. For Rural areas this corresponds to an IRR band of **Medium**.

**Step 4: Identify the recommended safe and appropriate speed using the speed management guide tables**

The safe and appropriate speed recommended by Table 2.1 of the Speed Management Guide is 40 km/h.

**Step 5: Conclusion**

*Proposed safe and appropriate speed limit recommendation = 40 km/h Waipouri Road (Full Length).*

Waipouri Road is a self-explaining road as the mean operating speeds (25 km/h) are below or near the proposed safe and appropriate speeds, despite the existing 50 km/h speed limit.

A proposed speed limit of 40 km/h was selected for Waipouri Road due to a multitude of factors. These being the narrow lane and shoulder width, moderate road-side hazards, high presence of vulnerable users and low mean operating speed (<30 km/h).

After considering all the above factors, the existing speed limit of 50 km/h on Waipouri Road in Mangere, is not considered to be a safe and appropriate speed limit for this road.

The proposed safe and appropriate speed limit is 40 km/h which is aligned with the recommended safe and appropriate speed.

The reduced speed limits will also reduce the potential and severity of crash risk for all road users.